

ARMY

OCTOBER 1956
50¢





Virginia Town Goes All Out for Army Reserve Program

Galax, a community of 6,000 in southwestern Virginia, is a case history of how community spirit and enterprise can support the Army Reserve program. Guided by Master Sergeant Lacey E. Burns, Army recruiter in the Bristol area, the City Council of Galax enlisted the aid of civic clubs, industrial enterprises, retailers, and the local newspaper and radio station to recruit and activate its own 978th Quartermaster Reclamation and Maintenance Company of 169 officers and enlisted men.

In passing out Army Reserve information Sergeant Burns isn't one to underestimate the persuasive power of feminine pulchritude

Capt. Miles J. Pondelicek, Senior Unit advisor in the area, guides Capt. Walter R. Jennings, CO of the 978th, and Cpl. Martin Morgan, First Sergeant-designate, in the intricacies of Army paper work

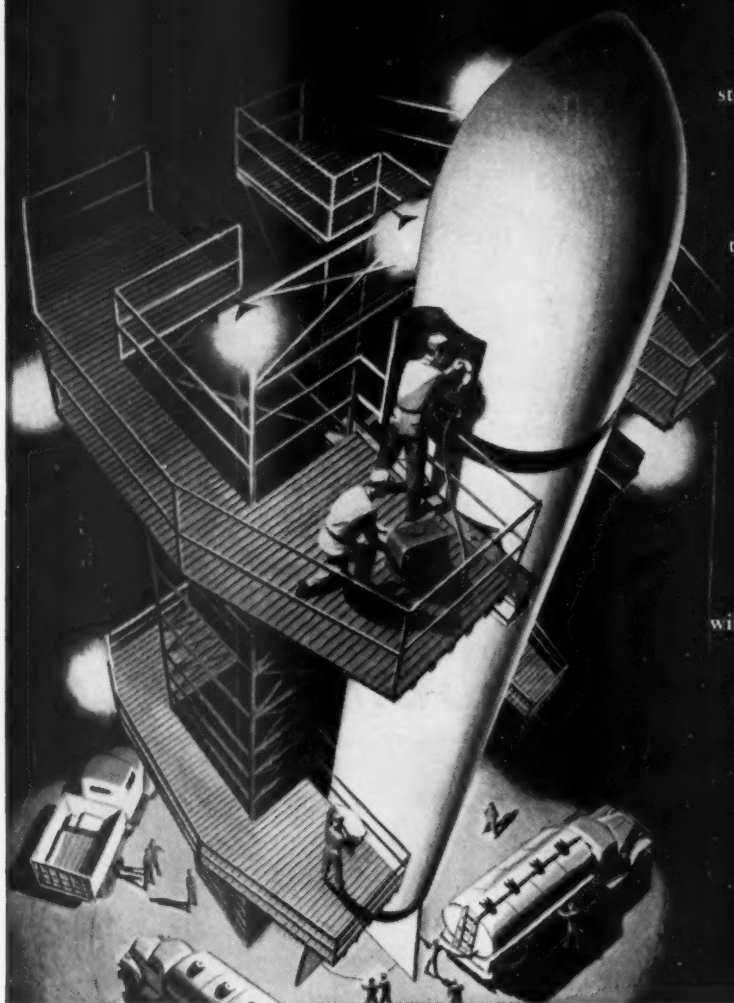


Brig. Gen. Philip F. Lindeman, Chief, Army Reserve & ROTC Affairs, went to Galax for the 978th's activation.

Here he congratulates prominent citizens for their support of the Army Reserve program



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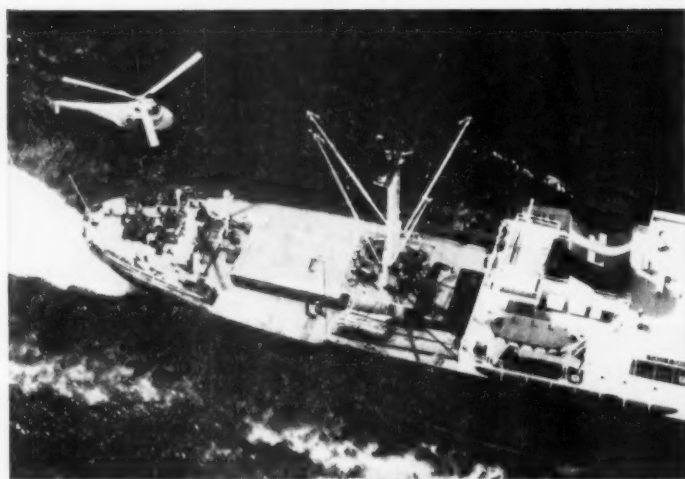
OCTOBER 1956



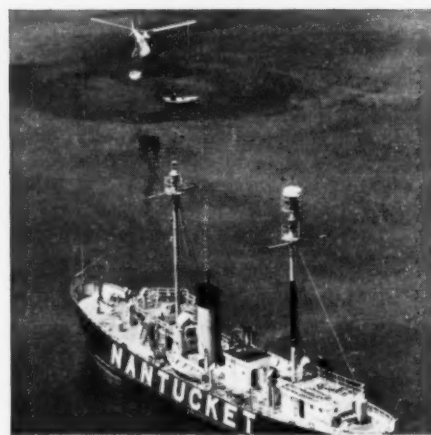
IN THE MEDITERRANEAN SEA—Participating in amphibious exercises of the U. S. Navy in the Mediterranean area are Sikorsky HRS helicopters of the Marine Corps. They are shown above with the escort carrier *Siboney*,

which carried 15 helicopters from their home base at New River, North Carolina. The training exercises featured helicopter vertical envelopment tactics.

AROUND THE WORLD WITH SIKORSKY HELICOPTERS



SAVED—A DANISH SEAMAN—A Sikorsky HO4S helicopter from the U. S. Coast Guard Station at Salem, Mass., takes a Danish sailor from the merchant ship *Paula Dan* 25 miles off Block Island. The sailor, stricken with acute appendicitis, was lifted in the basket visible below the helicopter and was flown to a hospital ashore for surgery.



SAVED—A U. S. COASTGUARDSMAN—Two days later the same HO4S helicopter picked up a U. S. Coastguardsman from the Nantucket Lightship. Also a victim of acute appendicitis, the man was quickly and safely taken to the same shore hospital. Helicopters have rescued more than 10,000 people in all parts of the world.



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On October 1, 1947, the world's first scheduled helicopter service was started by Los Angeles Airways, carrying air mail. One of the line's original Sikorsky S-51s, above, is still operating and has flown 10,000 hours. Los Angeles Airways was a pioneer in night operation and instrument flying, and carried over 10 million pounds of air mail in its first three years. The line now carries passengers as well as mail and express in its fleet of Sikorsky S-55s.

LARGER S-58s FOR NEW YORK AIRWAYS—The first of a new fleet of 12-passenger Sikorsky S-58s has been delivered to New York Airways, the helicopter airline serving Greater New York and nearby communities in three states. Sabena Belgian World Airlines has ordered eight for its European helicopter service. Both lines currently use Sikorsky S-55s. The S-58s will be the largest helicopters to be in regular airline service anywhere in the world.



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ARMY

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EDITORIAL POLICY

ARMY is a professional military magazine devoted to the dissemination of information and ideas relating to the military art and science representing the interests of the entire Army. ARMY strives to—

Advance man's knowledge of warfare in the fields of strategy, tactics, logistics, operations, administration, weapons and weapons systems.

Advance man's knowledge and understanding of the soldier as an individual, as a member of a trained unit, and as a member of the whole Army; emphasizing leadership, esprit, loyalty, and a high sense of duty.

Disseminate knowledge of military history, especially articles that have application to current problems or foster tradition and create esprit.

Explain the important and vital role of the United States Army in the Nation's defense and show that the Army is alert to the challenges of new weapons, machines, and methods.

Advance the status of the soldier's profession.

(Adopted by the Executive Council of the Association of the U. S. Army, 21 June 1954)

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The Month's Cover

When the color guard of the 3d Infantry Division paraded with the Army Flag at Fort Myer on 9 September, it was its first appearance at a retreat parade. Photo by the Army Signal Corps.

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THE MONTH'S MAIL

Home-Town Units

• I think the solutions proposed by Colonel Mulcahy and Major Wunderlich in the July issue are superb. When the first battalion of Omaha's Own Artillery is organized I'll be the first to join up. And I'll stay with it until my thirty years are up.

CAPT. ELLSWORTH NELSEN
Office of Army Advisor, 129th FA Bn.
Maryville, Mo.

Leadership Is Indispensable

• "The Army is Men" [August] is indeed timely and goes to the heart of the problem of relating leadership skills to technical skills. In research and development, we have been particularly interested in exploring the extent to which other agencies have found a way to handle rewards and compensations as between those in leadership and those in professional (non-supervisory) positions.

Within a given organization, we usually find that the supervisory ladder carries the greater rewards, and that the professional ladder (that is, without supervisory responsibilities) is given less prestige, pay or other rewards. However, the current severe shortage of professional

and scientific personnel is tending to obscure, at least for the time being, the fact that the United States is faced with an equally great shortage in its management, or leadership, group.

It may be that the present furor over the scientific and professional personnel is necessary to retrieve somewhat the balance as between the two groups, but I share your concern over the fact that we may forget that in the military, personal leadership is the indispensable condition.

COL. H. F. SYKES, JR.
Director, ER&DL
Fort Belvoir, Va.

Wanted: NGUS-USAR Joint Training

• I blew my top when I read that "Guard officers, lured by the promise of quick promotions, are switching over to the Army Reserve," in Mr. Jacobs' article on the National Guard [August]. We of the 78th Infantry (Army Reserve) Division may be able to offer our fellow Jerseyites of the 50th Armored Division something to come over to us, but not quick promotions.

I note that one state adjutant told his fellow Guardsmen that D/A announce-

ments concerning reorganization of the USAR will have a detrimental effect upon NG units unless positive action is taken now by every responsible NG commander. That sounds like business as usual between Guard and Reserve.

I have heard many times (and voiced it myself) the principal gripe of USAR against NGUS: that it is full of politics. At the same time, I am not unaware of the Guard's record and traditions.

However, it seems to me the time has come for the Guard and Reserve to bury the hatchet—and not in each other. Much could be gained if Guard and Reserve would try to cooperate. My own experience with the 50th Armored this summer was excellent. I was out scrounging for my battalion about three times the amount of TNT and blasting caps the division is authorized. G3 of 50th Armored gave us his complete cooperation in getting almost all we needed.

Hardly a man in my company knows at first hand what a tank can and can't do. We have never had a chance to actually get inside a tank to see what makes it go. Yet units of the 50th Armored are all around us. My company would profit greatly from a two- or four-hour familiar-

GET BEHIND AUSA FOR A BETTER ARMY

AS a former very junior member of the Executive Council when many of the present-day changes in AUSA were being first talked about, I feel compelled to answer the letter signed "Name Withheld" in the July issue.

I second some of his views. I have talked with many brother junior officers who also feel that **ARMY** magazine offers them very little. However, I'm convinced many of them don't see the forest for the trees. **ARMY** offers far more today than any of the separate associations ever offered their members, though it isn't as readily apparent. Its publication realizes a dream of those who worked long and hard to keep alive the old branch associations. I knew Colonel Joseph I. Greene very well, and I am sorrowful when I realize he isn't alive to see his dream of a united association realized.

It has taken the efforts of many far-sighted persons with many different views. Many have contributed to the present expanded AUSA which finds itself in a position where it speaks with authority. The Army's viewpoint has all too often been omitted from public discussions, but it is finding its way more and more into nationwide notice, through **ARMY's** efforts.

The Army's interests must be presented to the American people and their representatives. Those of other services have been in the public view for years, while the Army has been relegated to a back seat in the popular mind.

"Name Withheld" may still get information that will save his life. During the early days of the Korean war my unit was alerted for combat with 68 men on its infantry company rolls. We fought, but many lives would probably have been saved had our unit been

ization course on tanks. But as things stand now it is unheard of for a Reserve outfit to meet in a National Guard armory for such a course. I'd like to see some company-size maneuvers at summer camp that involved tank and infantry teams of the 78th and 50th. Pandemonium might result, but rather than now than later.

I know there are a thousand and one reasons why the Reserve and Guard can't work closely together, but the problem must be beat. For "a really ready reserve" we must learn to work together. We must start sometime, and the time is now.

LT. FOSTER TALLMAN
CO, Co I, 309th Inf
Holmdel, N. J.

Combine the Guard and Army Reserve

● "Combine the Reserve and Guard" in the August issue presents an excellent idea. The merger would permit economy and increase the readiness of the over-all reserve. However, in suggesting that positions of command, first sergeant, and sergeant major be held by active-duty personnel, Lt. Col. Key N. Save missed a key point: the Guard unit is part of the community. Today most advisers, regardless of how active they are in the community, are considered outsiders, and so would be any other active-duty people. The man who goes before the county or town commissioners to see that the local unit is included in the budget; the man who calls on employers to release men for field training; the man who must convince families that the outfit is a wholesome environment for their sons—those men must be respected members of their communities. The people with whom they deal must be confident they

understand their problems, their attitudes, and that they are not professional soldiers with an axe to grind.

Besides, the officers might resent active-duty commanders. Who wants to serve in a unit where he has no chance to command? Such a system might connote that the officer is not qualified for command, and result in bitterness such as that which exists, to some extent, over the replacement of over-age or unqualified officers by those from other components during our recent wars.

We are wasting men and money with two reserve systems. Unify them, but don't try to make them part of the Active Army.

CAPT. THOMAS M. HUDDLESTON
Army Advisor, 2d Bn, 119th Inf
Tarboro, N. C.

Downgrade the Drones

● Whether it is just or sensible, the Army has pushed its recruiting burden onto Army Reserve commanders. In carrying out that mandate while organizing new companies, I have called on scores of first-three-graders in the control groups for help. Percentage-wise, my results have been very low. Answers ranged from "Don't bother me" to pure derision.

There must be a cure for such "patriotism." We need to account only for those in the Reserve who are effective. Non-active officers are being weeded out. Non-participating first-three-graders should be downgraded.

For example, if I call Master Sergeant Zilch to take a TO slot, and he has no reason for refusing to do so, I should be empowered to enter a form on which his refusal is made part of his record, so that

higher headquarters will board him for reduction to corporal.

An enlisted man who does not participate loses proficiency. Certainly the Army takes a chance on recalling such a man from the control group at his top rank. The control group is a part of the Ready Reserve. A master sergeant out of contact with the Army is not ready in that grade, though he might be ready as a corporal. If he won't participate, he lacks that loyalty which a first-three-grader must have. It goes without saying that this applies especially to noncoms as opposed to specialists.

LT. COL. JOHN A. MYERS
CO, 3d Bn, 331st Inf
Akron 8, Ohio

Hit on a Target of Opportunity

● Your stimulating and much-quoted June issue contained the ammunition I needed as CO of a gun battalion faced with community relations and troop esprit inherent to the "missile conscious" state. Taking a page from "Targets of Opportunity," I dusted off the Anniversary Day of the 601st AAA Battalion which commemorated 27 June 1944 when it destroyed thirteen V-1s from positions on the white cliffs of Dover.

With that event as the central theme, we developed plans for an "open house" at a centrally located battery position. As a central eye-catcher to the County Fair type of displays planned, a real V-1 was moved on-site from the National Air Museum. Here the operation ceased to be the usual open-house activity. Local TV stations became interested, and higher commanders and staff (including Air Force), indicated significant attendances

fully trained and combat-ready. Cutting taxes is OK, but the real purposes of our Army must be kept before the public, or the urge to cut becomes great and our units' combat-readiness suffers.

The American people control our budget, our policies, and our role as a member of the defense team. They cannot make an intelligent estimate if they don't know the score. Our Association can inform them, and through them their representatives, but it takes money and some influence to do that job. "Name Withheld's" five bucks are part of the money. AUSA's new organizational structure should give us a more vigorous voice with greater influence.

Many persons have recognized the need for ARMY to publish varied types of articles, but the old cost factor continually stares at us. With 60,000 members AUSA could publish a much larger magazine with more universal appeal, but right now first things must come first.

While informing the American people, ARMY must

also keep their representatives informed. It will help in producing intelligent decisions from a viewpoint other than the prevailing one which seeks a cheap national defense. But to do this the Association must have a larger budget. The only way it can do the job is with every officer of every Army component a member. The overall advantages are there for all of us, if each member will see the forest instead of the trees.

Let's work to get every member of the Army into AUSA, and keep it growing. Let every junior officer begin to think in terms of higher echelons of command and their problems by digging into articles like General Wyman's and Colonel Hall's in the July issue and carrying them to their ultimate conclusions. The basic stuff is still there even if it isn't handed out on a silver platter any more. We can use ARMY to stir up thought, discussion, and experimentation, which are true processes of development.

CAPT. WILLIAM M. GLASGOW, JR.
Calumet, Mich.



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could be expected at our celebration.

As a result of this interest an open house at a small gun-battery site developed into a major battalion activity, well attended by men of the unit and their families, local civilians and civic groups, and representatives from group, brigade, 2d AA Regional Command, and 85th Air Division. We had a guest of honor and messages from the unit's World War II commanders. Demonstrations and displays included weapons from carbine to Nike complete with power-launcher equipment, and sound films of the units' engagement of the V-1s in the Antwerp X Defense in 1944-45. A simulated battle-station drill concluded the program.

From the enthusiastic response by the civilian community and the wide TV coverage, I feel the results were well worth the effort. To the officers and men of this battalion, the dramatic emphasis on their units' proud history and achievements in World War II was an excellent morale and *esprit* booster.

My thanks to ARMY, which supplied not only the ammunition but the primer for a most successful special activity.

Lt. COL. R. W. JOHNSON
CO, 601st AAA Gun Bn
Andrews AF Base, D. C.

Why Wait?

- Have you ever waited at an overseas replacement station, and wondered why? But do you know why? I'd like to know

why something cannot be done to prevent the waste of officer-hours in waiting for overseas transportation. The distribution list on my orders shows that the replacement station and port were notified of my arrival date at their places of business, and my overseas destination.

I'll concede that some waiting may be necessary, but almost always? Surely better use can be found for some of the excellent combat officers and NCOs I saw doing a very efficient job in housekeeping and processing.

I would like to suggest, despite my admitted ignorance of all the facts, that someone coordinate reporting dates to overseas replacement stations with shipping dates to overseas stations.

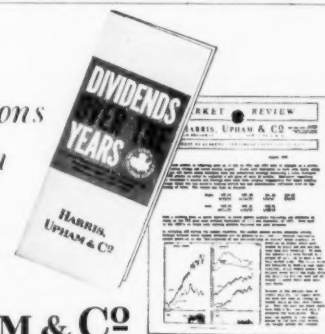
CAPT. SAM L. BARTH

MAAG to Iran
APO 205, NYC

ARMY is informed that reporting dates to POE are based on shipping schedules, and usually precede scheduled shipping dates by three working days, which have been found to be the average time required for orientation and processing of a normal personnel flow and to allow arrival of baggage shipped by common carrier to the POE. In order to place orders in the hands of personnel at the earliest practicable date prior to port date, shipping schedules prepared well in advance are used. Delays of more than three

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days usually result from an accumulation of numerous small unavoidable delays between issuance of orders and port date.

Delays beyond three days are rare and usually result from priorities for military traffic, weather conditions or mechanical failures.

Preembarkation processing is not done at home station because it is more economical and efficient if done at a central location for shipment to specific areas.

Defense of CGSC Doctrine

• Major Hansl's letter in the July issue, in which he states that he is deeply disturbed to find that so much of the CGSC's basic doctrine is hopelessly obsolete in the light of today's weapons capabilities, deserves an answer of sorts, lest some readers believe that Major Hansl's statements about the curriculum are factual.

I am not sure I know what course he attended. The "Special Associate Course" during 1955-56 was designed for 30 Chinese officers. I assume he attended instead one of the two 16-week Associate Command and General Staff Officer Courses given during the 1955-56 school year.

I have just completed the 41-week Regular Command and General Staff Officer Course, 1955-56, and since the Associate Course is a condensed version of the Regular Course and the units of instruction presented in the Association Course were

common to both courses, I feel qualified to make a few comments.

I was literally appalled by the statements concerning what Major Hansl called "school doctrine." As I recall what was taught me at CGSC, not one of his statements is correct. To refute them one by one, giving the correct version of doctrine as was actually taught would really make a lengthy letter. Further, to properly refute all his statements would require the use of certain classified information.

I believe that to disagree with a school solution to a specific problem is perfectly in order, if you have what you believe are valid reasons. In fact, it was most certainly acknowledged at CGSC that military problems have several workable solutions. I will admit that at CGSC one solution usually is considered more workable than another when it comes to grading examinations. However, the barbs directed at the "CGSC's basic doctrine" are not at all deserved.

In conclusion, I would agree with Major Hansl that Generals Taylor and Gavin are forward-thinking officers. As a matter of fact, General Gavin addressed the class in which I graduated on 15 June. The fact that he spoke highly of CGSC and its curriculum does not tally too well with Major Hansl's comments, however. Remarks made by President Eisenhower, General Davidson, and General Taylor in the May 1955 issue of *Military Review* likewise differ with the position taken by Major Hansl.

To be sure, injustices may have been committed this past year at CGSC. I and most of my classmates will fight the school to the bitter end for the day an armored cavalry regiment was stopped by 112 motorcycles and 10 armored cars during Exam 106, 17 February. But I sincerely hope that the number of graduates with Major Hansl's understanding of doctrine as it was taught at CGSC are few, because, in summary, what his letter said just ain't so.

MAJOR WILLIAM B. LEVIN
Chicago 30, Ill.

Major Hansl's Reply

• Either CGSC is serving Reserve officers a different fare from that offered to the Regulars and Chinese, or Major Levin's and my concept of today's battlefield requirements are poles apart.

I recently completed the Special Associate Course for Reserve and National Guard officers in five active-duty periods interspersed with extension courses over five years. Annual class sessions are held at the army area headquarters. The final session, Phase II Advanced, concerns itself primarily with logistics at the army and theater level, with some tactics thrown in. My previous comments applied particu-

(Continued on page 54)



**UTILITY
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Now in service with the U. S. Marine Corps, the Kaman HOK-1 is shown here as a cargo carrier. An all 'round utility helicopter, it is equipped with a hydraulic hoist for rescue missions. Carrying litters internally, it doubles as an aerial ambulance. Kaman is proud of the versatile role the HOK-1 is playing in our continuing program of National Defense.

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From Hats... to Helicopters

From the haberdashery business to the helicopter business in 60 days was the transition made by Capt. Kenneth W. Holzer of Russell, Kan., in the early months of the Korean conflict.

So thorough and efficient is the U. S. Army's pilot training, that Capt. Holzer, who began a rotary wing course in March 1952, graduated May 1 and in August of the same year was flying helicopter missions in Korea as an artillery spotter.

On one of his reconnaissance missions in a Bell H-13 helicopter, he helped restore critical lines of communications by dropping ropes from the air and hauling a torn-away temporary bridge back to shore.

Capt. Holzer is now an Army career pilot, helping to maintain the high standards of rotary wing indoctrination for aviation cadets at Fort Rucker, Ala., the Army's Aviation Training Center.



CAPT. KENNETH W. HOLZER
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A combination of the best pilots, equipment and maintenance gives the Army a new aerial dimension of mobility and flexibility. Capt. Holzer demonstrates in photo how critically needed supplies can be transported in the shortest possible time by helicopter.

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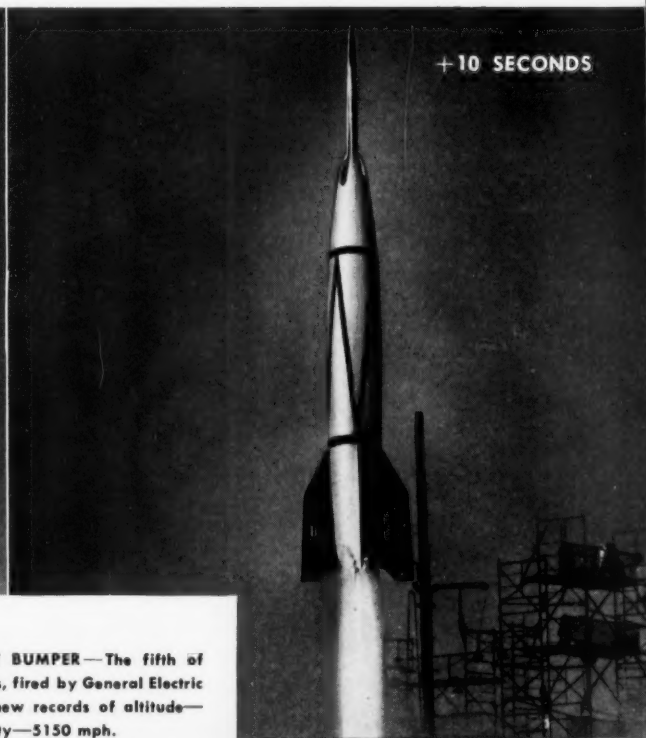
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How General Electric Experience

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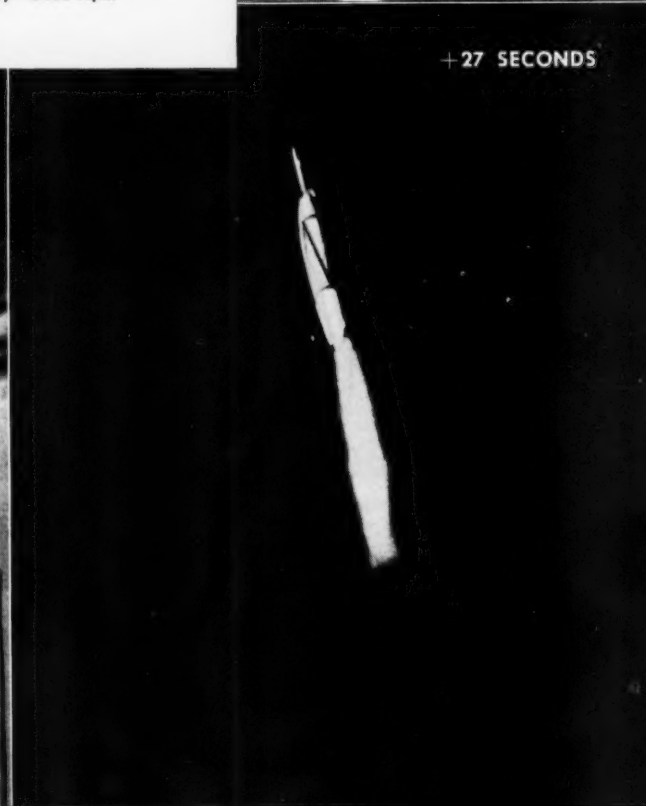


1949—PROJECT BUMPER—The fifth of these two-stage rockets, fired by General Electric in 1949, established new records of altitude—244 miles—and velocity—5150 mph.

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Advances Missile Technology

General Electric's Project Bumper established new records of altitude and velocity. But far more important is the valuable research data compiled in the successful completion of the Bumper project. Many problems were overcome with Bumper—problems in temperature, telemetry, separation, and aerodynamics. Bumper helped solve the problems of communicating with missiles at extreme altitudes, and was a major preliminary step in the development of a satellite. In solving these and other problems, General Electric has contributed a wealth of research data to the missile industry—information that is being utilized on the nation's top priority ballistic missile project.

General Electric's Special Defense Projects Department presently is working on an Air Force prime contract to develop the ICBM nose cone. Programs are being carried out in such varied fields as communications, hypersonics, metallurgy, mathematics, and thermodynamics to support this nose cone contract.

General Electric has formed the Special Defense Projects Department to act as a Company focal point for large, highly complex missile projects. Scientists in the new department, backed up by the vast resources of many General Electric operating departments and laboratories, are currently working to solve the perplexing problems associated with the ICBM nose cone and other missile projects.

By focusing this wide range of specialized talents of General Electric personnel on highly complex defense system problems, the Special Defense Projects Department is making significant contributions to America's defense program. Section 224-5, General Electric Co., Schenectady 5, N. Y.

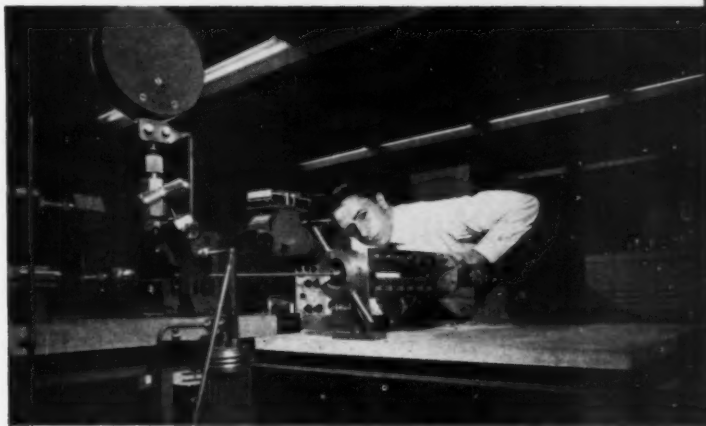
ENGINEERS: G.E.'s Special Defense Projects Department is currently expanding its staff of highly skilled engineers and scientists. If you have a background of successful creative engineering, send your qualifications to: Mr. George Metcalf, General Manager, Special Defense Projects Department, General Electric Co., 3198 Chestnut St., Philadelphia, Pa.

TODAY

—CONTINUED RESEARCH AND EXPERIMENTATION in advanced missiles and missile systems is helping solve such advanced problems as development of the ICBM nose cone. Headquarters for General Electric's participation in these programs is the Special Defense Projects Department in Philadelphia, Pa.



MR. ROBERT P. HAVILAND, Flight Test Engineer at SDPD, directed Project Bumper and other advanced programs, gaining valuable experience which he is currently applying to present missile programs.



DR. YUSUF A. YOLER—widely known for research in hypersonics—is currently engaged in the design and development of wind tunnels, shock tunnels, mass accelerators, and other facilities for continued progress in missile systems.

Progress Is Our Most Important Product

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THE ARMY'S MONTH

Luminous AR

THE low wattage of the prose style of Army Regulations is expected to cast a steady but dim light and when one appears with stepped-up wattage that clearly illuminates its subject matter the result is—well, electrifying.

This observation is directed at AR 525-30 "Army Missiles," published on 28 August 1956. In fewer than 900 words it says drily, but convincingly, about all that needs to be said on the Army's case for missile weapons.

We make this judgment with some authority since this magazine, as you know, has published several thousand words on the subject in the past several months. We stand back of all those words 99 44/100 percent, but if we were in the starting gate today we might settle simply for quotes from AR 525-30. For example—

ON THE PLACE OF MISSILES IN ARMY OPERATIONS: "All surface-launched missiles which meet Army operational requirements will be developed and integrated into Army forces, as a natural transition from present types of conventional artillery."

ON THE PLACE OF ARMY SURFACE-TO-AIR MISSILES: "The Army in executing its assigned anti-air function provides surface-to-air missile units for the air defense of the continental United States, and of United States overseas bases and forces."

ON ARMY PROGRESS IN MISSILE WARFARE: "In sup-

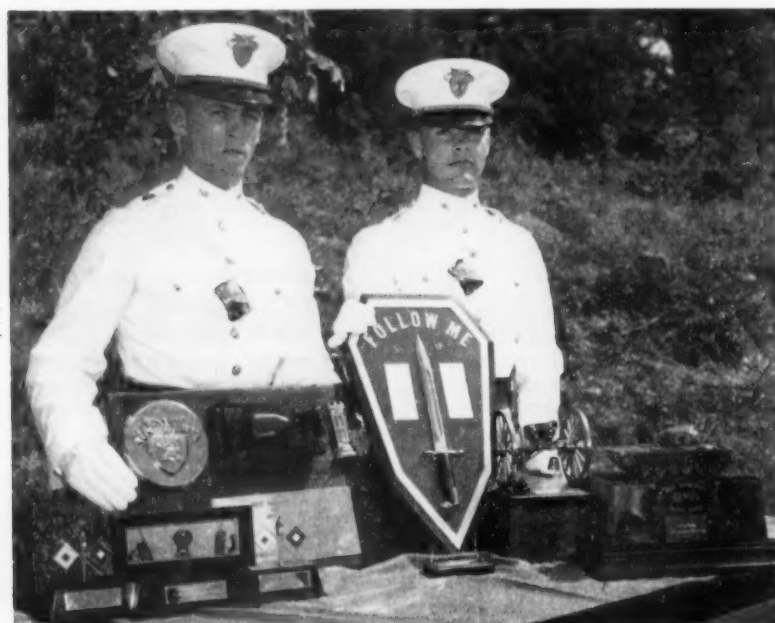
port of its requirements, the Army has developed and placed in general operational use ballistic and nonballistic surface-to-surface missiles, free rockets, and surface-to-air missiles. The Army has acquired developmental, training and operational experience on which to base the development and employment of improved surface-launched missile systems, which conform to Army requirements and missions. Surface-to-surface and surface-to-air units have been organized under approved tables of organization and equipment, have been trained, and have been assigned operational missions in the active Army."

ON ARMY REQUIREMENTS IN MISSILES: "The Army's surface-to-surface missile requirements include—

"Short-range. Assault or demolition guided missiles to be used against armor and fortifications. [That is, the Dart.]

"Medium-range. Missiles to supplement and extend the range or firepower of artillery cannon, to provide close or interdiction fire support for ground combat forces, and to compensate for the expanding dimensions of the battle area. [That is, the Honest John rocket and Corporal missile.]

"Long-range. Missiles capable of supporting deep penetrations or airheads, from protected and widely dispersed rear areas; and of delivering accurate fire on distant targets which are capable of affecting the execution of the



Signal, Engineer, Infantry, Artillery and Armor trophies are displayed by USMA cadet officers of companies winning the branch awards

Army's combat mission. [That is, the Redstone and Jupiter.]

"The Army's surface-to-air missile requirements include land-based anti-air missiles for defense against high, medium, or low altitude aircraft, drones, or artillery missiles. [That is, Nike A and B.] Surface-to-air missiles should also have a surface-to-surface role when feasible."

The Wrong Way

Reporter John Norris of *The Washington Post & Times Herald*, published a story saying that Admiral Arleigh A. Burke has attempted to mediate Army-Air Force differences over the future of Army Aviation by offering a "compromise" that would, according to Mr. Norris:

- permit Army Aviation to "expand" about 25 per cent above its present strength of 4,000 aircraft (Norris' figure) with an absolute ceiling of 5,000.
 - raise the weight limit of Army aircraft from its present 5,000 lbs. to 8,000 lbs.
 - maintain the roles and missions of Army Aviation substantially as they are, except that "SkyCav" type units could be put into "limited operation."
 - transfer Army air research and development to the USAF.
- Norris wrote that Army air R&D now totals "close to \$100 millions a year."

You will not be surprised to learn that Mr. Norris reported that these recommendations received "favorable initial reaction among Air Force officers" while the Army "response was said to be cool and guarded."

Cool? It ought to be downright frigid.

The restriction on numbers isn't too serious because it could be raised, except that when arbitrary restrictions are written into regulations the tendency is to cling to them no matter how unrealistic they may become.

The restriction on weight is more serious since it limits the size and conformation of aircraft and the power of aircraft engines. Once committed it is expensive and time-consuming to make changes. Furthermore, an arbitrary weight limitation can hamstring weapons and tactical and logistical organization across the board. Suppose, for example, a highly desirable weapon has a gross minimum weight of 9,500 lbs. Is the Army to pass it up because the aircraft it has can't lift it?

These same objections can be made to the freezing of roles and missions. Who can say what useful and economical purposes Army Aviation may be put to in the future? Should a piece of paper restrict its fullest possible use?

If there is any evidence that the USAF can handle Army air research and development more efficiently and more economically than the Army or that the USAF is prepared to develop better Army aircraft faster we are not aware of it. We are aware that Army officers familiar with the field have believed that Army aircraft programs were delayed when they reached Air research and development desks. We are aware that USAF development and procurement of its own troop carrier aircraft have not kept pace with either fighter or bomber aircraft. We are aware that Army reliance on the USAF for spare parts and maintenance of Army aircraft has, in the opinion of Army officers involved, been wasteful and inefficient.

The U. S. Navy holds firmly to the doctrine that it must "own," lock, stock, and barrel, every weapon and piece of equipment and the operating crews if it is to accomplish

REPEAT WINNERS AT THE NATIONAL MATCHES



SFC Lloyd G. Crow with the trophy emblematic of the national championship in the Open (sporting) Rifle match. He also won this event last year and is the first competitor ever to win it in consecutive years.



Another repeat winner, MSG Francis B. Conway with the Wimbledon Cup which he first won last year. He is the first man since 1900 to have won the cup two years in a row.

the Navy mission. It is obviously a sound one since the U. S. fleet today is second to none in operational capability and the U. S. Navy has by all accounts the finest research organization of any military service. Short of complete integration of the services (a highly improbable and not-at-all feasible concept today) it would seem that what is good for the U. S. Navy ought to be good for the U. S. Army—and the U. S. Air Force.

When the Navy did not like Mr. Louis Johnson's decision on the supercarrier it appealed and reappealed until it got the decision reversed. More recently the Air Force has consistently bucked administration decisions on the numbers of heavy bombers and successfully appealed to Congress for more bomber money. If Congress can be depended upon to make the proper decisions as to supercarriers and superbombers, certainly it ought to be able to make the same decisions on Army's Aviation.

These proposals don't compromise, they restrict and harass. They represent the wrong way to arrive at sound military decisions. They cannot promise to save the taxpayer a single red cent immediately and could be terribly costly over the long haul.

IT WON'T BE LONG NOW

OCTOBER 25-26-27

Second Annual Meeting

ASSOCIATION OF THE U.S. ARMY

Sheraton-Park Hotel

Washington, D.C.



WILBER M. BRUCKER
Secretary of the Army



GEN. MAXWELL D. TAYLOR
Chief of Staff



GEN. WILLARD G. WYMAN
Commanding General, CONARC

HEADLINE SPEAKERS

PROGRAM HIGHLIGHTS

• Headline Speakers:

Secretary of the Army
Wilber M. Brucker

Chief of Staff of the U.S. Army
General Maxwell D. Taylor

Commanding General, Conti-
nental Army Command
General Willard G. Wyman

• Presentations and Discussions:

New Organization Plans
Tactics in the Nuclear Age
Strategy for the Future
Logistical Support
Research and Development
Guided Missiles
New Weapons and Equipment
Personnel Trends
Career Incentives
Reserve Forces

• 16,000 Square feet of new Industrial Exhibits

• Displays and Demonstrations of new and experimental weapons, vehicles and equipment by the Technical and Administrative Services

REGISTER NOW

To be sure that you get in on all of the functions scheduled for the 2nd Annual Meeting, you should register as far in advance as you can. It will be possible to register on arrival but registration applications must be handled on a first-come, first-served basis. To register in advance, here's all the dope you need.

1 All requests for reservations, banquet tickets, and registration must be sent to AUSA, 1529 Eighteenth St., N.W., Washington 6, D. C.

2 They will be handled on a first-come, first-served basis.
Check or money order covering the cost of registration and tickets requested *must accompany application*. Indicate billet desired but *do not* send advance payment for billet.

3 Registration includes attendance at business sessions and tickets to the Official Reception and the two luncheons. Banquet tickets are to be purchased separately.

4 Advance registration and reservations will be accepted from members only. If you are not currently a member, you can add \$5.00 to your check for 1 year's dues and be enrolled at the same time you register.

5 Advance mail registrations and reservations will be confirmed by mail and your registration badge, billet reservation, and tickets may be picked up at the AUSA Registration Desk—Sheraton-Park Hotel, beginning 1200 24 October 1956.

BILLET: Indicate desired billet but do not send advance payment.

Sheraton-Park Hotel*

Rates for Active Military

Single Room (1 person)	\$ 7.00
Double Room (2 persons)	\$10.00
Double Room (3 persons)	\$13.00
1 Bedroom Suites	\$17.50; \$18.50
	\$20.50; \$22.50
2 Bedroom Suites	\$40.00; \$45.00

Rates for Non-Active

\$ 7.50; \$ 8.50; \$ 9.50
\$11.00; \$12.00; \$13.00; \$14.00
\$14.00; \$15.00; \$16.00; \$17.00
\$17.50; \$18.50; \$20.50; \$22.50
\$40.00; \$45.00

*When Sheraton-Park rooms are filled, AUSA will endeavor to obtain comparable accommodations for you at another hotel.

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presentation of *active-duty ID*
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OCTOBER 25-26-27

Second Annual Meeting

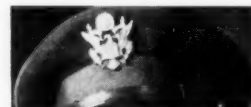
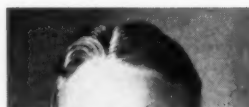
ASSOCIATION OF THE U.S. ARMY

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Washington, D.C.



WILBER M. BRUCKER
Secretary of the Army



ADVANCE REGISTRATION AND RESERVATION APPLICATION

2nd Annual Meeting—Association U. S. Army

MAIL TO: Association of the U. S. Army, Attn: Annual Meeting
1529 Eighteenth Street, N.W., Washington 6, D. C.

**PLEASE PRINT
OR TYPE**

NAME _____ RANK _____
LAST, FIRST, MIDDLE INITIAL MILITARY MEMBERS

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Enclosed please find payment of \$ _____ for the following:

CIRCLE APPLICABLE PORTIONS

REGISTRATION: Military Members \$8.00

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SEE OTHER SIDE FOR BILLET RESERVATION

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- 16,000 Square feet of new Industrial Exhibits
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- Reception for the Secretary of the Army and the Chief of Staff
- Annual Banquet
- Two Luncheons


RESOLUTIONS


Brig. Gen. P. F. Lindeman, Chairman of the AUSA Resolutions Committee, asks that resolutions to be considered at the Second Annual Meeting be forwarded to the committee not later than 15 October 1956. Any member of the Association may submit a resolution for consideration. Address them to: Chairman Resolutions Committee, c/o Secretary, AUSA, 1529 Eighteenth St. N.W. Washington 6, D. C.


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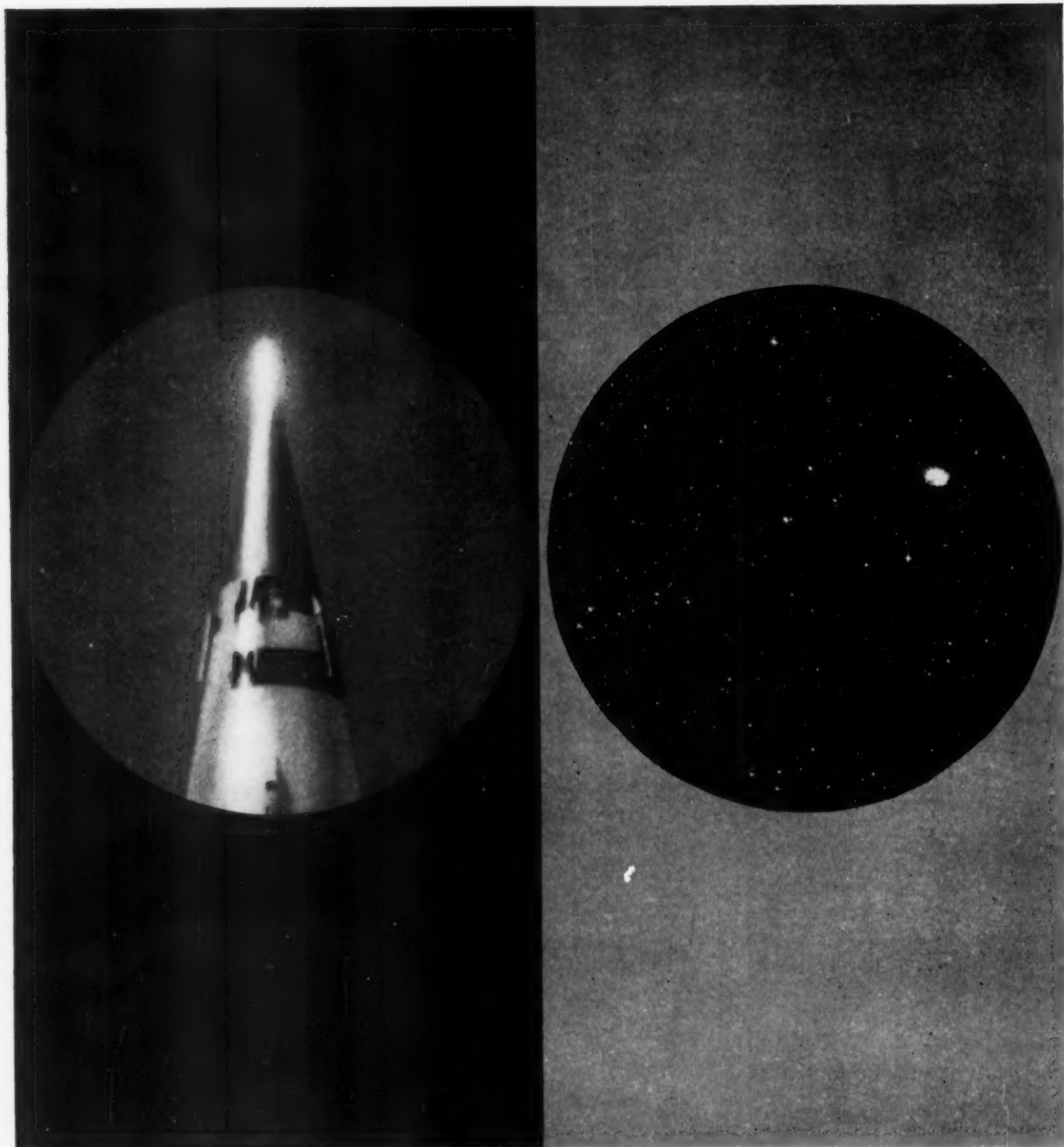
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 Members desiring hotel reservations will be accommodated at the Sheraton-Park insofar as space permits. When all rooms at the Sheraton-Park are reserved, AUSA will endeavor to obtain comparable accommodations at another Washington hotel.

 The Sheraton-Park Hotel requires presentation of *active-duty ID card*, if not in uniform, to obtain special military rates.

 If you desire a firm appointment with Career Management or an appointment to examine your 201 file please write a note accompanying your registration and reservation application indicating your desires.

USE CARD PROVIDED TO REGISTER



HOT TIP

One day not many months from now a Martin rocket—carrying the first man-made earth satellite—will depart this world at an unheard-of speed of 18,000 miles per hour...destination, outer space.

This coming moment in history points up a significant fact:

No other company in the aircraft world knows more today about tomorrow.

MARTIN

ARMY

WHERE DO WE GO

FROM HERE?

COLONEL PATRICK D. MULCAHY

It is time we took a coldly realistic look into the future. If the Army is to be substantially decreased, what steps can we take to maintain the highest possible level of combat potential? In short, what should be our personnel and training plans for a possible long haul with reduced forces?

Since operating with reduced numbers, complicated by armament changes, is our problem, it is reasonable to say that the soundest generalized answer would be to improve our standing force. Or, stated another way, we must find ways to develop a qualitative gain to compensate for the quantitative loss. Accepting this goal of quantitative improvement as our over-all planning objective, what are our specific requirements in personnel, organization, and training to achieve that objective? Let us list these essentials and then analyze them in two ways: First, what is now being done or planned? Secondly, in which areas is there most room for improvement? The primary goals we may classify as (1) research and development both in the hardware and personnel fields; (2) organizational modifications based on conceptual changes in doctrine for future combat; (3) the career attractiveness program and personnel procedures for a reduced Army; (4) the training programs used to improve the proficiency of both units and individuals.

OUR over-all R&D program has gained some momentum as a result of the increased stature of the Department of the Army staff position for R&D, but mainly from the improved caliber of officers and civilian specialists assigned to it. At the CONARC level there is similar evidence of constant staff-level improvement. The status of CONARC's Combat Developments Section and the personnel assigned to it are real evidence of the rigorous emphasis on R&D from the staff-operational viewpoint.

Viewing the program from the field level, we see a different picture. There R&D is implemented largely by a patchwork system evolved from the old Infantry Board-Ordnance Proving Ground concept. Changes—and in particular frequent additions to the field pro-

The Army's future lies in the
foresight and zeal with which
its officer corps stands up
to the challenges of the times



gram—have been made in recent years, but an integrated field effort is conspicuously missing. Even a partial run-down of the list of R&D field agencies is enough to make any organizational analyst realize the problems of appropriate missions, coordination, control, and duplication of tasks. For example, we now have such varied weapons groups as the Special Weapons Office at Fort Bliss, the Electronic Proving Ground at Fort Huachuca, Redstone Arsenal, the Project Michigan group, and six CONARC boards. Other related groups are at Sandia Base, Lincoln Laboratories, and the Special Devices Center. All of the technical services have established R&D groups.

On the human, operations and training side of the picture we have three major agencies: Personnel Research Branch (PRB) of TAG, Operations Research Office (ORO), and Human Resources Research Office (HumRRO) with its four field Human Research Units under control of CONARC. Budget-wise, it must be added, the personnel and training research effort is only an insignificant portion of our total effort—not more than one and a half per cent of the R&D dollar.

Based on this knowledge, what are the critical areas most in need of improvement to operate in our anticipated reduced-strength period? The answer, I suggest, involves (1) use of command control for staff supervision, (2) better use of in-service personnel, (3) greater emphasis on the problems of the user of future equipment, and (4) organization of field commands to permit increased integration of effort and closer supervision of field research.

The creation of a Matériel R&D Command and a Training Research Command should permit better staff planning at D/A and CONARC levels, and at the same time establish our R&D effort on the time-proven principles of single control, unitary direction, and command supervision. While it may be argued that topside reorganizations, even of command structures, do not necessarily produce improvements, the urgent need for improved integration of effort and command supervision seems apparent.

Personnel and training research gives us what is probably the most clear-cut example of this coordination problem. PRB, charged with research in personnel selection and use, operates independently under TAG, with staff supervision by an R&D sub-section. Several officers have indirect control of this civilian-staffed agency. ORO, charged with research primarily in strategy and combat operations, works almost entirely independently. Even at D/A level there is no system of control other than through budget-research task approval. A small number of officers work in a liaison or subordinate capacity within ORO, but no direct system of supervisory control other than R&D monitoring has been established for operations research. HumRRO, with the mission of research in motivation, morale, leadership, individual training and small-unit effectiveness, works under a somewhat greater degree of military supervision. Besides CONARC staff supervision, field

units are partially controlled, under a system of military-civilian direction, by a military chief and a civilian director of research.

With three independently operating civilian-type agencies—each functioning in extremely related areas under varied systems of staff supervision—it appears that maximum benefit from an efficient and coordinated personnel, training and operations research program would be highly unlikely. This is not a criticism of the many capable, devoted researchers working for the Army; rather it is a charge that we in the Army have not given them the best of our organizational experience. Further, with a ratio of Army officers to civilian researchers of perhaps 1 to 75 working in this field, military supervision and control is more nominal than real. Any Army understanding or direction of this scientific research into total human utilization has been further weakened, for only a handful of officers have had graduate training in psychology and sociology and related fields. Unless in the future we train officers to do this kind of research, the Army cannot expect maximum sound research results based on military requirements which can be readily used by forces in the field.

THOSE of us who ask "How do we use this stuff?" or "Where is the payoff?" should recall that we get back from an effort only what we put into it. If we really want the kind of payoff we need to make an effective Army, we must pay more than lip service to the military support and direction we give the program. Shunting the problem off by setting up small subordinate R&D staffs, parceling out liaison officers, or naming titular Army representatives for civilian-controlled research agencies is certainly not the answer.

Whether the need for greater integration and military supervision is as great in matériel research, where we spend the bulk of our R&D dollars, I must leave to those who have worked within that program. Because our weapons research has been closely tied in with the independently established logistical programs of our historically divided combat arms and technical services, it is possible that the need is even more urgent; but it is equally probable that the reorganization problem would be much more difficult. Whether the Army of



Colonel Patrick D. Mulcahy, Infantry, Chief of Human Research Unit No. 2, CONARC, at Fort Ord, California, is a 1939 graduate of West Point. During World War II he was Airborne Adviser at Allied Forces Headquarters, Mediterranean Theater. After graduation from Leavenworth in 1950 he was battalion commander, regimental executive, and CO of the 350th Infantry in Austria. Graduate training in psychology and political science at Tulane University led to his utilization tour with the HumRRO unit.

A product of research and test by Hum-
RRO scientists and combat-experienced of-
ficers, Trainfire was designed to simulate
battlefield conditions in marksmanship
training. It includes an electro-mechanical
"pop-up" target which falls when hit, and
a moving target which can be raised and
lowered. "Half-bull's" are used in place of
"full bull's-eye" in the targets shown be-
low.



the future can afford the luxury of compartmental branches in the combat arms or independently operating technical services is moot. Our analysis of the need for more integration of R&D effort, however, obviously highlights the need for study of this area.

WITH respect to organizational modifications based on changes in doctrine, there has been no lack either in quantity or originality of concepts. We have proposals for battle groups, AFTA, and Pentamic units. Proponents of these schemes foresee the need for increased mobility, flexibility, and independent action in future operations. Planners are now studying ways to retain our regimental concept within such a modified battle-group concept. The big problem here, however, is essentially an unanswerable one—unless we have unused clairvoyants on our staffs: Just what conditions will exist on the future battlefield? We may say that our combat and logistical support forces must be able to operate under atomic conditions. What the new weapons might be we can now only assume from basic research supplemented by long-range intelligence estimates.

The 64 Billion- Dollar Question

Not knowing the conditions of future warfare, we tread on unsure ground when we direct our thinking to that uncertain future. But our best staff guesses must be made now, based on past combat experience and an estimate of our future capability. With new ideas and

revised units being constantly conceived, the \$64 billion question is: How can we evaluate the merits of a new concept, doctrine, or organization? So far the answer to that has been almost tragically lacking. We have injected many new ideas into Follow Me, Blue Bolt and Sagebrush without producing a single clearcut evaluation of a concept's merits. Biased opinions, old equipment, varied states of unit training, personnel shortages, uneven leadership, and staff experience differences, all worked to present the maneuver evaluation groups with insurmountable problems. Essentially we have learned nothing positive so far except that our present system is inadequate for evaluating the results of a proposed concept. This negative knowledge, however, should not be underrated. An appreciation of the complexities of any analysis of a cause-and-effect situation is basic to any scientific endeavor or military test, and, unless the evaluation system we arrive at is based on the best possible scientific control of all relevant test factors, we may be buying a conceptual pig-in-a-poke. Fortunately, our current staff planning soberly reflects the necessary basic understanding of the evaluation problem. There is every reason to believe that steps will be taken to organize a permanent Army-wide test, experimentation and evaluation system which will permit the most objective, rigorous and controlled analysis of any concept before a change is accepted. Reflection on the cost alone of any organizational change is enough to warrant an independent, unbiased evaluation system. Most important, however, are the possibly tragic consequences to our country's welfare of an ill-advised, premature acceptance of some attractively packaged

concept change. In short, change for itself is not enough; change to attract budget support is dangerous. Change, however, is needed when the other conditions are altered; but the acceptance of change is never justified until its actual differential effects can be separated from the other factors influencing the measurements of the various effects.

CAREER attractiveness is probably our most studied and reported on problem. Surveys by sampling agencies, studies by research groups, analyses by nearly every Army staff level and high-level civilian-military boards have judged and still are sitting in judgment on sundry pieces of the problem. Is it possible to get sense from this mass of information so that we can make a long-range plan to get, keep and make the most use of high-quality personnel? I believe the answer lies in an appreciation of our total American cultural shifts, together with a clean separation of those factors requiring Congressional action from those which are correctible from within the service.

At one time the Army through its isolation could maintain a quite unique cultural climate of its own. The minimum of civilian-military intercourse was largely a result of the complete system of housing, commissaries, and social activities which kept the soldier and officer on the post. Without much money, an Army man could still maintain a standard of living above that of most civilians. Now, however, most Army families live and mix completely with the civilian world. The change does not result entirely from lack of government quarters, but from the general shifts in population which have diminished the isolation of Army posts. Many military activities are no longer identified with an Army post. The Army man today has no unique status or prestige because of his identification. On the contrary, his status is established by the home he buys in a civilian community and the social level in which he mixes. Obviously, what establishes this level of living is the amount of hard money his family has to spend. The time is past when "old families," "clergymen" and "Army officers" could live at the best social levels merely because of their names or positions. All this means that we of the Army must face the real problem of establishing a long-range career program within a culture dominated by the wage-level social system.

Closing the Gap Between Directive and Action

We realize that our military leaders understand the situation. Besides pay increases, they are currently pressing Congress for a well-thought-out program for career improvement. Palliative measures along fringe-benefit lines will never be the answer in the competitive society of which the Army is a part. Unless the Army's basic pay equals that of the civilian, we will continue to lose highly qualified men. The attraction of a service career

will draw some youngsters, but not enough to give us the across-the-board quality the Army must have. Exclusive of the problems requiring legislative action, other aspects of the over-all career retention program need in-service correction. These include the need for much greater delegation of responsibility and authority, particularly at the company officer-NCO level; inadequate leadership in the same grades; job dissatisfaction among training division cadremen; individual and family instability even under Gyroscope; NCO promotion stagnation resulting from MOS changes; and dissatisfaction among officers over opportunities for advanced schooling and promotion, and the OEI system.

Unquestionably such problems won't be solved on short notice. Many factors, such as the possible manpower cut, essentially outside of Army control, will continue to upset many plans for corrective action. Perhaps a real obstacle to correction of such a problem as greater delegation of responsibility is in the discrepancy between top-level directives and field conditions where the implementing action must be taken. For example, there was issued recently a directive on increased use of NCOs through greater decentralization of responsibility. At the same time, field commanders were being plagued with the extremely centralized control procedures of the new Command Management System—which made it more difficult for post and division commanders to delegate personnel control or administrative actions to regimental and battalion commanders.

Apparently we have in the deficient junior officer-NCO leadership problem a career factor for which no particular long-range plan has been evolved. Research in this difficult question has already indicated the need for some revision of instructional material. A visit to any division will show the need for more practical training of young ROTC officers who command up to eighty per cent of our platoons. Leadership cannot be learned through less than two years of experience alone, even if the young officer knows the principles. At the NCO level the situation is no better. The leaders' courses died through personnel and fund cuts and a feeling that such courses could not be justified. Similarly, many excellent NCO academies in overseas theaters and certain army areas were discontinued because of inadequate support. Field commanders can still run them, but at their own risk. Further, because of the daily need for squad leaders with even a smatter of training, our academies have largely degenerated into "schools of standards" which emphasize drill procedures, inspection methods, and care of equipment. At several so-called academies, less than seven per cent of the curriculum is devoted to any kind of leadership problems.

A Stiff Push Towards Better Leadership

That research is providing data that will improve leadership training is evident; that there has been a

decline in the quality of our instruction and schools is apparent. What we need is a good stiff push on the way back to renewed emphasis on the problem if we are to get more qualified junior leaders. As a starter, an experimental Army-wide NCO academy might be established, using an in-service research agency to determine the best instruction methods. Later, this academy could be expanded into a permanent institution with a rigorous one-year military science-general knowledge curriculum that would graduate NCOs of a quality

high enough to warrant commissioning in the Army Reserve. The use the Germans made of such an officer-NCO reserve pool is well known.

The need has been pointed out for an expanded program of postgraduate training, particularly for combat-arms officers and particularly in the neglected area of the social sciences. We cannot afford to stand still. Scientific advances come too fast for any institution to maintain a *status quo*. We must progress, or we will fall by the wayside.

AN analysis of the individual and unit training program for a reduced strength Army usually points up the fundamental fact that our current programs are generally sound. When we find a small unit deficient in some aspect of training, the reason can usually be traced to inexperienced leaders, continuing personnel shortages, or excessive turnover. A squad leader cannot produce an efficient squad if he can work with only three or four men a day. Until every commander, starting at the top level, is willing to use filled-up units for non-training missions, the parceling out of small details will continue to make our unit-training program relatively ineffective. At D/A level this would entail a hard-headed, realistic maintenance of a drastically reduced "ready force." Rather than have all units at a thirty to forty per cent level of training, it would be safer to have half or less of them at top efficiency.

Unlike the unit-training program, which is considered sound in itself, the basic and advanced individual instruction by training and Gyroscope divisions reflects a different picture. The current ATP 21-114 is largely a result of the Korean experience. Every trainee, it was decided, had to undergo every phase of training before he left a training division. Obviously, in becoming a jack-of-all-trades, he could become less well trained in some phase, such as rifle marksmanship, marching, physical conditioning, or discipline. The fact that we have spread our basic training too thin is verified by evidence accumulated by research on individual levels of achievement. As an understanding of the problem grows, there is every indication that definitive revisions of our basic and individual training programs will come when the final results from controlled field tests are analyzed. That such programs will point out the short-term efficiency of complete "faculty" instruction systems at the expense of increased company officer-NCO participation is taken for granted.

WHETHER you agree with the selection of the four critical areas of research and development this article has touched on is immaterial. What is important is the need for our whole officer corps to appreciate the complete state of flux in our political, scientific, social and military affairs. Our way of life has indeed reached a critical period. The whole officer corps must react to the times and become imbued with a sense of individual responsibility for helping to shape those national defense policies which will answer the question: "Where do we go from here?"



Research and development in hard goods areas range across a wide spectrum of activities from pure research that may or may not lead to "hard" production of weapons and equipment of revolutionary impact and down, at the far end of the R&D band, to gadgets, training aids, and simple developments designed to simplify methods or reduce costs. Such is the "paper and water" artillery projectile developed by Army Ordnance, here test-fired from a 105 howitzer.



During a hike through the Arizona desert, Quartermaster Corps volunteers are passed bags into which they breathe. Breath samples are analyzed to determine the amount of energy consumed in carrying different weights.

This portable laboratory at the Yuma test station measures the body heat this man expends on the treadmill under the broiling Arizona sun.

Crawling through the jungles of Panama is tough on both man and his clothing. In this test the QM wanted to know how well its hot-wet uniforms could stand the gaff.



Colorfastness is tested in this "Fade-Ometer" used by the QM's Textile, Clothing and Footwear Division at Natick. A direct current arc simulates sunlight equal to summer sunlight in Florida.



THEY TEST THE STUFF YOU'LL USE

Five hundred soldiers of the Quartermaster Corps voluntarily give themselves a tough workout in all latitudes so that your clothing, equipment and chow will serve you better

JOHN G. HUBBELL

RECENTLY I visited five soldiers at Natick, Massachusetts, who had voluntarily impounded themselves for six cold, hungry weeks in a bare, chilly room without windows. The temperature was held at sixty degrees. Each of the five beds had one sheet, a pillow, and no blankets. The men wore undershorts and had no other covering, awake or asleep. There was nothing for them to do but lie shivering in the beds,

John G. Hubbell has done much freelance writing since graduating from the University of Minnesota in 1949. He served in the Navy in 1945-46, and is now staff writer and associate editor of Minneapolis-Honeywell's *Flight Lines*.

read or write letters. They were fed 1200 calories a day—about one third of normal. This consisted of three glasses of powdered chocolate milk, two to four slices of buttered toast, and six jellied candy bars.

These men were volunteers in an important experiment by the Army Quartermaster Corps' Research and Development Laboratories at Natick. Physiologists wanted to know how the human body compensates for heat loss during long periods of cold, and whether being chilled imposes any special food requirements. Such knowledge would be of vital importance to the QMC's textile engineers and food technologists in devising better clothing and rations for Arctic combat troops.

A physician was always with the men. All body wastes were analyzed. Blood tests were made daily and basal metabolism measured four times a day.

When I visited them the men had completed four weeks of the ordeal. They were colder than a properly dressed person could become in the Arctic, and hungrier than they had ever been in their lives. One of them, 21-year old Private Joseph Clifford, summed up the group's feelings: "This is the hardest thing I've ever done—the constant hunger, the monotony of lying in bed freezing all day with nothing to do, no chance for exercise, nothing to see. But I'd do it again. I wanted to do something important in the Army. That's why I'm here."

These five men belong to the Quartermaster Corps' volunteer pool at Fort Lee, Virginia, an incredible detachment of 545 soldiers who make a profession of testing, under the most rugged geographical and climatic conditions, all Quartermaster Corps gear. Their motto is the French phrase, "*Nous verrons*" ("We shall see").

Each winter 200 of them go to Fort Churchill, Canada, just west of Hudson Bay, where the winter temperature hovers around forty degrees below zero. Here the newest Quartermaster developments in Arctic clothing, sleeping bags, tents, sleds and heating devices are tested. Last winter the men tried out the new Coldbar suit, a garment made of sponge rubber-like plastic material and worn beneath the standard field uniform. It has a hood, fits tightly around the wrists and ankles, and was planned to provide a new high in insulation against cold.

Every day for five freezing months the men did strenuous field maneuvers in the suits, looking for weak spots. They would have vigorous sessions of calisthenics, then dig foxholes in the snow and sit and lie in them for two hours at a time. Then they would rush out for more maneuvers or calisthenics. They wanted to know whether the suit did the insulating job and whether it remained flexible so that a man wearing it could move quickly in combat.

THE Quartermaster troops learned that the Coldbar suit did its job *too well*. Body heat built up during the periods of high activity and the men became uncomfortably hot. Further work was needed, the tests showed.

Each summer similar volunteer teams head for the blistering desert areas of California and Arizona forty-two miles west of Yuma. Except for Death Valley the climate in this region is the hottest and driest in North America. Air temperatures reach 125 degrees and ground temperature is often 150 degrees. This is where Army test teams learn how long and how hard a man can be expected to work in searing desert heat; what kind of uniform best protects him under the blazing sun; what kind of boots and helmets are best. The men run, walk and crawl across the desert, and tiny devices attached to key points on each man's body record skin temperatures before and after each activity. Oxygen loss, energy expenditure and basal metabolism are constantly measured.

Also in the summer months other

volunteers move into the dank, insect-infested swamps and jungles of Panama to test newest tropical clothing and equipment—rainwear, boots, mosquito nets, tents, insect repellents and paints and sprays that will protect equipment against mildew and fungi. During World War II jungle insects and bacteria ate \$40,000 worth of tents a day.

"It was a problem worth extensive research," says Dr. Ralph Siu, Technical Director of the Research and Development Office of the Quartermaster General's office. "The protective chemicals we've now developed have proved effective."

While the Corps' volunteers are living with the new developments in the jungles, deserts and Arctic wastes, the scientists at Natick, an impressive group of 1,200 civilians including specialists in almost every field of technology, work indefatigably to make the American soldier an almost indestructible fighting man. Their efforts paid off with two dramatic results in Korea.

ONE night in July 1952, a small patrol of the U.S. 7th Division slipped behind enemy lines near Kumhwa. Suddenly Chinese troops discovered the patrol and the men dived for cover. Just as Pfc. Julius J. Osowick hit the dirt a grenade rolled beneath his chest and exploded. He was blown into the air, but medics found only superficial wounds in his right arm and left hand. His upper torso, which had taken most of the grenade's wallop, was undamaged. After a few days he was back on the front line.

What saved Osowick was one of 200 armored vests which had arrived in Korea a few days earlier from QMC scientists. The vest was a sleeveless jacket made of 12 layers of 14-ounce nylon.

"The vest won't stop a bullet," explains Robert Forbes, one of the Corps' young scientists. "Complete protection would call for such heavy material that the soldier couldn't move. What we wanted was protection against shell fragments and grenades, which account for more casualties than bullets. As soon as we had something we thought would work we didn't wait to test it. The men in Korea had nothing to lose and maybe their lives to save by trying it out. We hustled to the hottest part of the line and outfitted 200 men. In a few days we knew it did the job."

In those few days a dozen men besides Osowick emerged from combat with gaping rips in their vests from

shell fragments and grenades. Without the vests all of them would have been killed or badly wounded, but none was more than scratched. "The news spread fast," Forbes says. "Soon every combat man in Korea wanted a vest. By the end of the war they all had them."

The vest weighs eight pounds. A pair of similarly-designed trousers would bog the combat soldier down and decrease his fighting efficiency. However, scientists at Natick studying the possibility of a new uniform which would not only completely protect the soldier against fragmentation missiles but also against flame, atomic radiation, and the overpowering heat blasts of nuclear weapons. They hope to make it a standard uniform for comfortable wear in the Arctic, in jungles, mountains or deserts.

"It is still in the research stage," says Dr. Stephen Kennedy, Chief of the Textiles and Footwear Division at Natick. "But if it does work out, think what it would mean logistically. A single uniform would replace the 160 items of clothing that must now be issued for duty in all climates."

THINGS undertaken by Dr. Kennedy's scientists have a way of working out. During the first winter in Korea some 6000 U. S. troops suffered frost-bitten feet or trenchfoot. They wore the Army's old shoe-pac which gave little protection and wore out fast. Fighting, hiking, and sleeping in them day after day, the soldier had to carry twelve pairs of socks and keep changing them, for his feet would sweat and the paralyzing cold would soon freeze the sweat.

Scientists at the Textile, Clothing and Footwear Laboratories rushed work on a new boot to replace the shoe-pac. It was seamless, insulated with a double layer of wool fleece and an inner lining of rubber. Troops from the volunteer pool at Fort Lee wore the new boot on a brutal testing course where several years' wear and strain can be imposed on combat materials in a few weeks. They walked, ran and slid across sand, gravel, emery imbedded in concrete, loose quartzite, broken glass, chopped granite and lava rock, and through rocky ditches filled with water.

Then the scientists took the boots apart and microscopically examined them. In all respects the new boot seemed to have held up. It withstood cold, afforded good traction, was comfortable to wear. The boot was mass-produced and rushed to Korea before the second winter began. That winter



MAJ. GEN. KESTER L. HASTINGS
The Quartermaster General



COL. WILLIAM D. JACKSON
Chief, R&D, Office of TQMG



Administration building at the Quartermaster Research and Development Command at Natick, Massachusetts. This is one of a number of modern buildings at this important Quartermaster Corps facility



BRIG. GEN. CHARLES G. CALLOWAY
CG, QM R&D Command
Natick, Mass.



COL. JOHN D. PETERMAN
Chief, QM Food and Container Institute
Chicago, Ill.



DR. A. STUART HUNTER
Scientific Director, QM R&D Command
Natick, Mass.



The hooded soldier peering through the window of the Arctic climatic chamber is telling the tester what it is like to stick out a minus 40 degree temperature for a prolonged period.

the Army reported only 200 cases of frostbite. In the third winter not one case of frostbite or trenchfoot was reported officially.

The boot also meant a great saving over previous costs for boots and socks. "We are learning," says Maj. Gen. Kester L. Hastings, Quartermaster General, "that we can put a better-equipped, better-protected, better-fed soldier in the field more cheaply than ever before."

FOR example, the soldier in combat carries a one-burner stove so that he can cook his own rations when he is unable to get back to a field kitchen. During World War II this stove was made of tin and steel alloys, critical metals, and weighed forty-five ounces. Scientists in the Research and Development Command's mechanical division came up with a stove made of non-critical magnesium which weighs only 22 ounces and saved the Army \$1,552,000 the first year it was issued.

The Army had reported that rations and equipment were being damaged on aerial supply drops. A more shock-absorbent material was needed to replace the felt padding on the platforms which carried supplies to the ground. Engineers at the Quartermaster Food and Container Institute in Chicago designed a solution: boxlike arrangements of cardboard filled with paper formed into honeycomb cells. The paper honeycombs proved to be five times as efficient as the felt padding in taking up the shock, and did the job for one eighth of the former cost.

Another expensive airborne supply

problem was the cargo parachute. The canopy of the standard parachute was 64 feet in diameter and weighed 125 pounds. It took three men an hour to repack it. It was made of \$555 worth of nylon.

With the honeycomb to help absorb the shock, a new smaller parachute was designed, 24 feet in diameter and weighing only 35 pounds. It takes one man only twenty minutes to repack it. It is made of narrow criss-crossed strips of ribbon and costs only \$150.

The Air Force and Navy recently came to the Quartermaster food scientists with a problem. Jet fighter pilots are now flying longer and longer missions and sometimes need food before coming to earth again. But they fly at such high altitudes that they must wear plastic face masks and oxygen masks, and the only way for them to eat would be to go to lower altitudes where the masks could be safely removed. This would decrease a plane's range because a jet consumes more fuel at lower altitudes. Another disadvantage is that lower altitudes might bring the pilot within reach of enemy anti-aircraft fire.

THE food technologists are licking the problem. High altitudes Air Force and Navy pilots are now experimentally drinking their meals through a tube in the face mask. Servings of ham and eggs, beef stew and chicken, all in liquid form, are held in containers no bigger than a pop bottle, strapped to the pilot's leg.

All branches of the service continually worry about how their men will

fare in desperate survival situations. The Army wanted to know how little food and water a man needed to work his way toward rescue and handle weapons capably in a survival effort. What was the minimum amount he needed each day, and how long could he subsist on this minimum? This was a job for the men in the test pool.

Each summer for the past five years a group of these gluttons for punishment have gone to the Laboratory of Physiological Hygiene at the University of Minnesota, where nutrition experts are using them to find the answers. At Minnesota the men are severely restricted on food and water. One summer a group was put on 580 calories a day, about one seventh of what they normally ate. This fare consisted of a vitamin pill, two starch jelly bars, a salt tablet and two cups of black coffee. They were allowed one quart of water a day. Normally a human needs three.

On this diet the men began each day by marching five and a half miles in one and a half hours. Then in the laboratory they would walk for one hour on a treadmill tilted upward at ten degrees. Finally, on another treadmill, they would run themselves into exhaustion.

Each day all body waste was collected and chemically analyzed; blood was examined; temperatures were taken; intellectual performance was measured; vision, balance and coordination were tested.

"We had to learn how long a man could think straight, maintain a reasonable outlook and perform adequately on this small amount of food and water," explains Dr. Henry L. Taylor. "Could he handle complicated weapons and sustain the will to survive? We learned that 1000 calories a day—the equivalent of two bars of milk chocolate—is about minimum for survival, and that a man can last for about three weeks on this much. Water is a different thing. It depends on how much a man perspires. In cold weather the minimum would be about a quart a day; in extremely hot weather about eight quarts."

From the studies at Minnesota the Quartermaster Corps soon hopes to evolve a universal survival ration for all services, one which could sustain a man in Arctic cold, an Asian jungle or the Sahara. As each experimental ration is developed it will again be up to the Fort Lee volunteers to put their motto to work. *Nous verrons*: We shall see!

BARNACK'S BRAINSTORM

The author says the moral of this story is to join 'em if you can't whip 'em. Maybe you'll fancy that it comes a little closer than that to your neighbor

LT. COL. MILES SIMPLE



"Merciful heavens!"
cried General Buckboard,
"he's hanging himself."

YOU will not find the name Richard Barnack anywhere in the *Army Register*. That is because I made it up. You would not be justified, however, in concluding that there is no such person on the Active List. Indeed, some who read this may recognize him. Whether you do or not, you will agree that the facts I relate justify some camouflaging of identities.

Although Barnack and I have known each other since that antediluvian time when we were both second lieutenants,

our acquaintance was rather casual until we happened across each other one lunchtime about two years ago in a Pentagon beverage bar. Our conversation was conventional—we said hello, exchanged commiserations over being assigned to Washington, and traded civilities about our wives and the current number of our progeny. Having dutifully agreed that we must get together for lunch one day soon, we went our respective ways.

Probably I would have forgotten about Barnack, but no more than a week later he phoned. He had something important to talk to me about, he said. Having nothing on my desk that was too urgent to wait, I agreed to come to his office.

Making my way to one of the Pentagon's more inaccessible parts, I reached

a roadblock manned by a guard whose looks alone would make a Founding Father feel like a fellow traveler; but before I could stammer out a confession, Barnack was there to vouch for me. In his office he pulled his chair close and began talking in a hushed voice.

"You work for General Halvorstad, don't you?" he asked.

"I told you so the other day."

"Yes," he said, "but I didn't realize who he was."

"Why, everybody knows he's Chief of . . .," I began.

"I don't mean that," he interrupted. "But isn't he also a member of the B-slant-R-W-E-S?"

"The what?"

"The Board of Review of Wild-eyed Schemes," Barnack explained.

Colonel Simple is the pseudonym of an artilleryman who got that way from long years of Pentagon duty. He is now, to the relief of many including, perhaps, himself, Korea-bound.

"Oh, yes," I admitted rather sourly—people who talk in initials annoy me. "It's one of his I. A. O. D. jobs."

Barnack got up, looked into the corridor, then carefully closed the door.

"I guess I'll have to fill you in," he said. "You can't help me unless you know some details, and I've got to have your help."

That was my introduction to Project PARASOL.

Briefly, it was a concept which in one package was the answer to many problems. Specifically—to the extent that the details can be told in the public prints—it provided protection against small arms fire, defense against air attack, shelter from various types of unpleasant weather, and as a by-product it threw in a vast increase in the mobility of the individual soldier.

It had all started when Barnack was serving under a C.O. who was fond of threatening that, if such-and-such went wrong, people would find out what happened "when the egg hit the fan." One day when Barnack was particularly irritated at his C.O., he began speculating longingly about what actually would happen. This train of thought led him to remember that World War I airplanes had machine guns that fired through their own propeller arcs, but that the stream of bullets had to be synchronized so as not to hit the propeller blades. Without this synchronization, the whirling propeller in effect constituted a transparent but impenetrable disk.

From this daydreaming came the germ of Barnack's great concept, which was for each soldier to be equipped with an individual propeller—not primarily for locomotion but for protection. Instead of being straight, the arms of the propellers would curve down on either side of a vertical drive shaft to a point just clearing the ground. Thus, his propeller spinning furiously, the wearer would move along inside a shimmering blur like a sort of animated weeping willow, protected from above his head to his ankles.

The idea became practicable with the development of a motor whose specifications are still highly classified. Suffice it to say that by miniaturization the motor combined light weight with great power.

"After we got the XM-72 motor," Barnack told me, "it was easy. Then, by introducing variable pitch and fixing the blades so that they could be elevated to horizontal level, my gadg-

et could be converted from a shield against small arms fire into an individual helicopter."

It was pretty radical, but I was impressed. "What do you call it?" I wanted to know.

"The 'automatic umbrella,'" Barnack said. "Now, will you help me with it?"

"Sure," I said, "but what can I do? It looks like you've taken care of everything."

"It isn't the engineering part I need help on," he said impatiently, "it's getting the idea adopted."

As the approving authority, the B/RWES (as Barnack chose to call it) was the major obstacle. He wanted me to work on my General so that, when Project PARASOL came up for consideration, it would already have one advocate. "Preliminary staff coordination" is the term Barnack used, although I have heard the same procedure described at less exalted levels as "greasing the skids."

Anyhow, within a couple of days I got Barnack in to brief General Halvorstad, who heard him through patiently. Although cautious, he was sympathetic.

"Your idea looks good," he said. "Tentatively, I'll support it. But the man you must convince is the president of the Board, General Buckboard."

"General George Armstrong Buckboard, sir?" Barnack asked.

"The same," General Halvorstad said.

"I'll remember, sir," Barnack said.

I DO not like to dwell on what occurred when Project PARASOL came before the B/RWES; but the events of that meeting, though painful, are essential to my story.

I attended, not as a participant but only to carry my General's briefcase. However, I could listen and watch, both of which I did.

Barnack, although visibly a little nervous before such a firmament of stars, gave a good briefing. If the members were noncommittal, at least they let him finish. He was looking less tense when General Buckboard spoke.

"What is it you call this thing, Colonel?" he rasped.

"The Shield, Spherical, Gasoline-propelled, XM-1, sir," Barnack replied.

"No, no, I don't mean that," the General snapped. "What was that other name?"

"The automatic umbrella, sir."

General Buckboard snorted. "Any discussion, gentlemen?" he challenged,

glaring at each board member in turn. "No? Well, I have something to say!" His face began to turn red. "In all my service, I've never heard such an outrageous proposal. I've got too much respect for the combat soldier to think he wants to go into battle hiding behind a fan like some kind of burlesque dancer. But what really astounds me is the utter disregard for tradition, the flouting of one of the most hallowed customs of the Service, the . . ."

"Tradition?" one of the other generals interrupted; "customs of the Service? I don't understand, General."

"Give me strength!" General Buckboard said almost prayerfully. Then, patiently, he began to explain. "You surely know that no member of the United States Army appears in uniform carrying an umbrella. Think of the effect on discipline, on morale, on *esprit de corps*" (and on uttering these holy words he looked upward reverently) "if we were to throw this time-honored custom out the window. I could almost believe this project is a plot to sabotage the Army!"

He turned to Barnack. "I don't want to discourage your initiative, young man," he barked, "but next time try something practical."

After it was over General Halvorstad and General Buckboard left together. I hurried behind with the briefcase, mainly to avoid Barnack's stricken glance.

"Bucky," I heard my General say, "you don't really believe that tomfoolery about morale and umbrellas, do you?"

"Of course not," General Buckboard grunted, "but we can't okay a dangerous project like that. Think how all those whizzing propellers would scare the horses! You'd have runaways all over the landscape."

THE Army never could get anywhere, General Buckboard continued, until it went back to the horse and got a reasonable proportion of mounted units—say, one division in three. He explained that the criterion he used to pass on every project that came before the Board was: what would be its impact on restoring the Army to its senses by putting the Cavalry back in its saddles.

"Of course, I seldom give my real reason," he said slyly. "But there's usually enough wrong with these hare-brained schemes that it's easy to find something perfectly valid to turn them down on. Just like that thing today."

He seemed quite pleased with him-

self, but my boss was shaking his head as he walked away.

BARNACK was no novice at staff duty. If they gave battle stars for Pentagon service, his liver patch would sport an impressive number. He was disappointed, but when I next saw him he was clearly as determined as ever. After I relayed what I had overheard General Buckboard say, he showed immediate interest.

"That gives me an idea for a new approach," he said. His new direction of attack, which did appear to have possibilities, was to mount the XM-72 motor inside a steel helmet, run a drive shaft through the top of the helmet and extend the rotor blades out and down from that.

"It would look like the helmets with the horsehair plumes that the English Household Cavalry wear," he explained. Personally, I was reminded more of the "atomic beanies" that kids were wearing a few years back, but I agreed that any resemblance to traditional military headgear—especially traditional cavalry headgear—would certainly make a good impression on General Buckboard.

"Why not call it the Dervishes' Derby?" I suggested.

"Don't be flippant," Barnack said reproachfully. "How about the 'Mechanical Cuirass,' developed by Project DRAGOON?"

When DRAGOON came up for reconsideration by the B/RWES, General Buckboard appeared very taken with the whole thing.

"This is a big improvement," he told Barnack. "But it seems a little un-American."

"If I may put in a word," General Halvorstad said, "the United States Cavalry's dress uniform once featured a plumed helmet. Indeed," he continued, his voice taking on an oratorical ring, "it was during the period of our greatest military glory, the days of Custer and Crook, Miles and Mackenzie—naturally, I refer to the heroic years of the Indian Wars." He ended with a bow to General Buckboard, who positively glowed with pleasure. Approval for Barnack to go on to the next step—actual field testing—was a foregone conclusion. In fact,

General Buckboard asked to be notified in advance so that he personally could attend the trials.

Remembering what he had said before about frightening the horses, I was afraid that his enthusiasm would be short-lived. But on the day of the test he was in a very hearty mood. He was even patient throughout the inevitable last-minute adjustments.

Barnack was testing the helmet himself. After the preliminary checks, he took position some distance from the group of observers. I must say that, with the curved rotor blades sweeping down from his helmet, he looked positively medieval, like something out of a Teutonic legend. He fiddled with some knobs on a panel hanging on his chest, there was a puff of blue smoke and the rotors began to whirl. Instantly Barnack's figure disappeared within a shimmering, silvery hemisphere.

WITHOUT going into details, the tests of the gadget's ability to deflect missiles were completely successful. Everything that was thrown at the Mechanical Cuirass bounced harmlessly off. Everyone was pleased, General Buckboard most of all.

Then it came time to test the Me-

chanical Cuirass as a helicopter. The rotor blades elevated until what had been a dome surrounding Barnack became a sort of extended halo above his head. He twisted another knob, evidently changing the pitch of the propellers, and instantly shot into the air. He was an impressive sight, suspended about ten feet up.

But suddenly we all realized that something was dreadfully wrong. He began to kick frantically. His hands flew to his chin strap. His face turned purple.

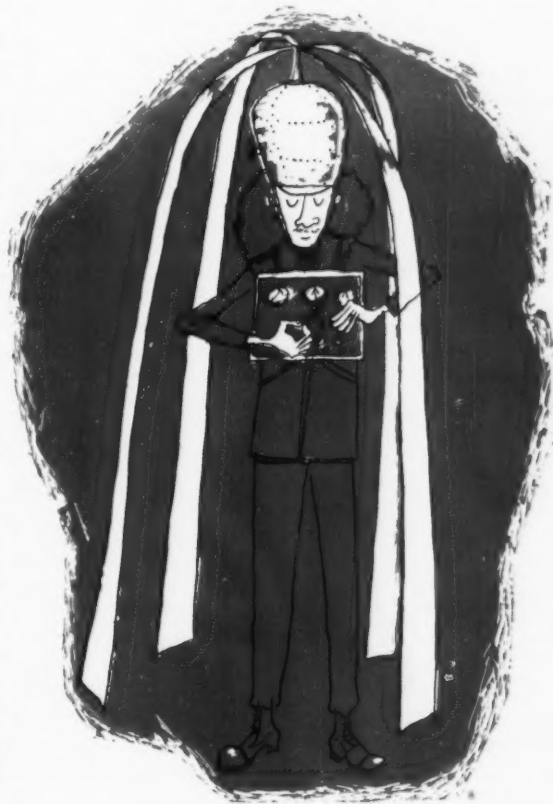
"Merciful heavens!" General Buckboard shouted, "he's hanging himself in that contraption. Somebody do something!"

Whatever was going to be done had to be done fast. Someone called the Fire Marshal to bring a ladder; somebody else was even about to call the Air Rescue Service. Despite all this, I doubt if anything would have been in time. What saved the day was that Barnack's chin strap broke and he fell to the ground while the Mechanical Cuirass sailed away over the horizon. It was soon reported by the Ground Observer Corps as a flying saucer and duly shot down by sixteen jet fighters of the Air Defense Command. Barnack, fortunately, was only shaken up, but Project DRAGOON seemed a dead duck.

After a week in the hospital, Barnack returned to duty and wrote a staff study that was so eloquent an argument for the formation of a hussar troop to be organically part of every medium tank battalion that General Buckboard hailed him as the Army's brightest young officer since Phil Sheridan and got Barnack assigned as his Special Assistant. The General himself, on the strength of his chairmanship of the B/RWES, was transferred to a weapons-development agency so highly classified that it doesn't even have initials.

Barnack went with him. The last I heard he had given up golf entirely. That part of his time not devoted to polo was being spent in designing a rotary shield called "Pegasus," for use both by a man and the horse he is riding.

If this story has any moral, perhaps it is that if you cain't whup 'em, jine 'em.



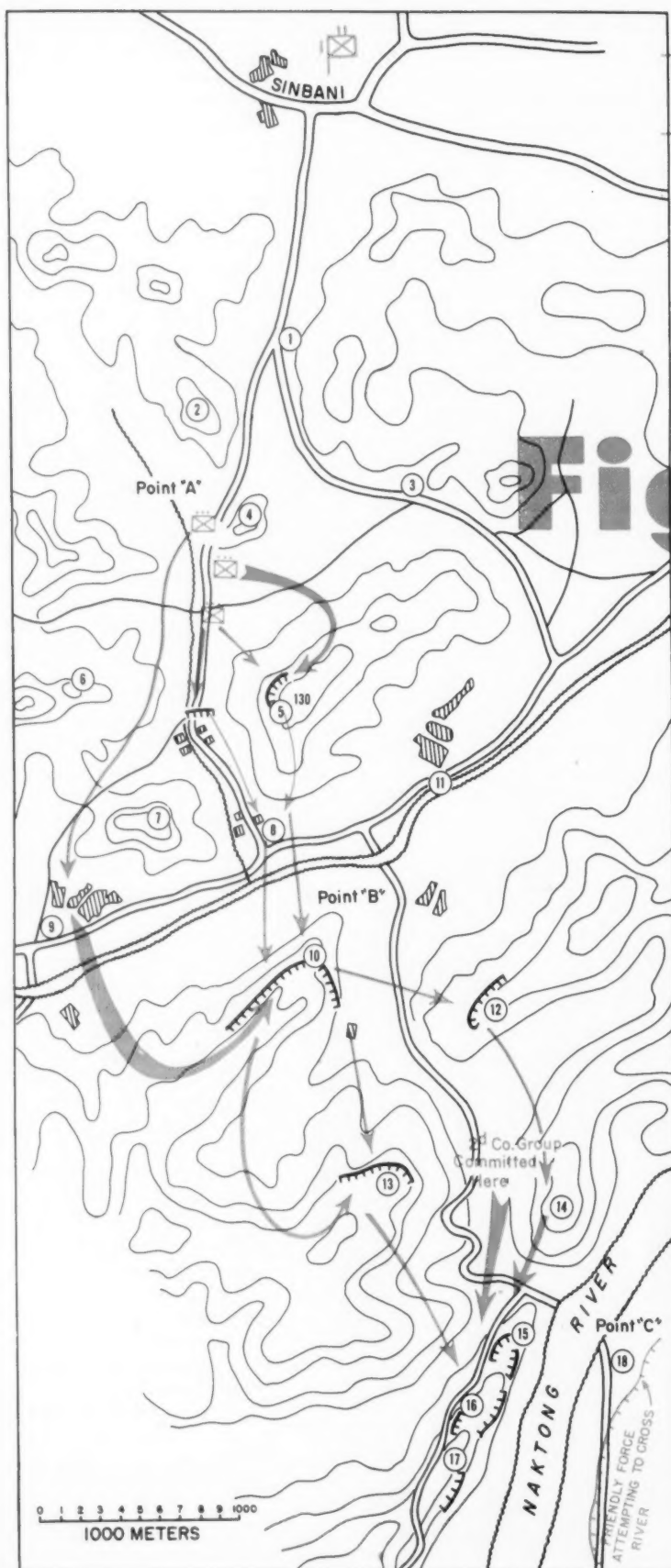


Figure 1. A company task group advance in Korea

THE development of tactical atomic weapons has led us to adopt the tactical doctrine of dispersion in combat-size units. Within the battalion the doctrine calls for past practices in dispersion. The idea is, of course, to provide the enemy with no more than one battalion-size target at a time while still presenting a force of sufficient combat power and cohesiveness to avoid piecemeal defeat by non-atomic attack.

To think of battalion-size units as marginal atomic targets was certainly a step in the right direction. It appears, however, that such a concept may well be out of date very shortly if not now. The great powers' supply of atomic weapons is increasing rapidly. As the numbers increase units of battalion size will become good day-to-day targets. We can't afford to lose elements of that size. We must spread out within the battalion. But we must be able to concentrate these elements quickly to overcome the enemy exploitation and then rapidly disperse again.

Isn't the next logical step to use combat groups of about company size? Certainly the organization must include means for more rapid movement, greater fire capability and the ability to communicate over greater distances than our company of today. The means for organizing such a force are available today. In fact, companies have fought many actions of just the type that would be required. For example, let's look briefly at a company combat-group action that took place in Korea,

By COMPANY

beginning on the morning of 24 September 1950.

THE situation was very fluid (as it usually will be in atomic war) since our forces had just broken out of the Nakdong River perimeter, crossed the river, and were fighting against enemy groups of up to battalion size. Enemy forces of unknown strength were holding up the crossing of friendly units at C (see Figure 1). The 1st Battalion Combat Team had reached Sinbani and was directed to send forces to determine enemy dispositions to the northwest and to destroy the enemy opposing the friendly crossing at C. The battalion commander organized three company task forces using the rifle companies as the basic elements. One was sent to the northwest, one to destroy the enemy opposing the crossing, and one was kept in reserve. The artillery battery attached to the 1st BCT would provide support from the vicinity of Sinbani. Company A was

the basic element for the mission to area C. To Company A was attached one section of 81mm mortars, one section of heavy machine guns, one section of AAA (AWSP) and one jeep ambulance. A jeep-mounted SCR-508 radio was provided the company combat group for communication with battalion. No tanks or Army aircraft were available at the time, or they would have worked with the Company A group. They were requested. Because the Communists had been using mines to a considerable extent, a P&A squad was attached.

Mission Type Orders

The Company A commander was given a "mission type" order; that is, he was more on his own than in most operations. In decentralized operations in atomic war, mission-type orders will be the rule. For speed, the A group commander decided to move his force along the road in extended column formation. For ready reference as to location of subordinate elements of his task force, for direction of supporting fires and for reporting the situation of his force to battalion, the Company A commander designated a series of check points (1 through 18 on Figure 1). Concentrations in a common target-numbering system may serve as check points. Because the combat group was widely separated from other friendly elements, and the enemy situation was virtually unknown, the force commander provided for all-around security by use of small patrols. An Army

aircraft would have been of great assistance in this. First contact with the enemy came when the advance-guard elements encountered rifle and light-machine-gun fire from the vicinity of Point 5. The flank patrol to Point 7 reported that area clear of enemy. The commander of A quickly established a base of fire with his 81mm mortars, the AAA (AW) section and the heavy machine guns and enveloped the enemy at Point 5 and the roadblock. At the same time, he directed the patrol at Point 7 to push on and reconnoiter the village at Point 9 and the stream for crossing sites. This first action netted half a dozen enemy killed and a prisoner who admitted he was part of the security element for a larger force at Point 10. The A force commander immediately moved his fire-support elements to 8 and with the assistance of artillery fires from the battalion area began neutralization of the enemy at 10. The flank patrol to 9 reporting that area clear, the force commander enveloped the enemy at 10 by crossing at 9 and attacking north up the ridge. Twenty enemy were killed here and the remainder of an estimated company were routed. Using the same technique of rapid reconnaissance, maximum fire support and envelopment, the company task force had by about two hours before darkness cleared the enemy from Points 12 and 13 and came up against the enemy at Point 15. This promised to be a tougher nut to crack, particularly with approaching darkness, so the bat-

Lieutenant Colonel George H. Russell, Infantry, enlisted in 1937, was commissioned in 1941, and integrated into the Regular Army in 1949. He earned a B.A. in Education from Western Washington College (1946). Recently on the staff of the Tactical Department of The Infantry School, he is now attending the Naval War College. His only previous contribution, "Make 'em All Fighters," was in the September 1955 issue.

Figure 2. Possible Company Task Grouping

NOTES. (1) Necessary communication may be ANGRC-7 in battalion net; ANGRC-10 in company net.
(2) Each organic platoon is provided two "Army Mule" type vehicles for heavy loads.
(3) Additional supply vehicles are provided as needed.
(4) AAA is quad cal. 50 and twin 40mm SP.

Figure 3. Possible organizations (type dictated by mission) of force shown in Figure 2.

The combined attack of two company groups cleared the enemy at Points 15, 16 and 17, and the company-size groups deployed quickly back to the area of Sinbani.

As a result of this we may use company-size combat groups separated

Company-size task groups such as shown in Figure 2 are within our capability at the present time, using our rifle company with attachments. There are, of course, many different groupings of fire support and other elements that may be attached to or work with the company, depending on the job to be done. Within the company group must also be the greatest flexibility possible. The group must not only be able to attack, defend a piece of terrain, or fight retrograde actions, but must also be capable of reconnais-

With the large areas we will have to cover in future wars, whether atomic or non-atomic, all forces must be capable of reconnaissance and security as well as fighting. To provide special units for these tasks as we have in the past would unbalance our forces and cut down our fighting strength. Mobility is essential for such reconnaissance and security missions as well as combat, and the two Army Mule type vehicles provided each organic platoon will greatly increase the movement capability by cutting down the foot soldier's load. With only a stripped-down load to carry he should be able to cover four miles an hour. Much of the time the ability to move four miles in an hour will be greater mobility than can be gotten with armored carriers—particularly when you consider the problem of gasoline resupply, the targets provided by supply installations and the ability to lift men and Arm

Mules by our present helicopters. Some of the many possible ways the company task force shown in Figure 2 may be organized for combat are depicted in Figure 3. The tanks cannot, of course, be moved by our present types of aircraft and would have to make a ground link-up with helicopter-lifted elements.

MORE and more will the attack and defense become similar. Compact defenses with large units are suicidal in atomic war. An atomic weapon as small as 20 KT will destroy a battalion combat team in a perimeter-type defense as we have known it in the past. A commander should avoid at all costs getting his unit into a perimeter or hedgehog. When he does this he loses his flexibility and in effect says to his enemy, "I'm an atomic target; come and hit me."

The mission in both attack and defense will be to destroy the enemy. Each side will try to present the other with the minimum forces initially. The goal will be to uncover concentrations of the enemy, strike them with atomic weapons (while presenting the enemy with little or nothing to shoot at) and then to plunge in and destroy the shocked survivors. This will be true in both attack and defense. What this means is the greatest possible depth in formations in attack and defense. Our company task groupings must remain within supporting range (of battalion-controlled atomic weapons) and reinforcing distance of battalion elements, in most cases, to avoid piece-meal defeat. However, by giving the battalion an atomic weapon of suitable size and range (the Honest John rocket will do until a better one comes along) the company groups can be spread out to an extent that offers considerable protection. The amount that company groups, and platoons within the company groups, can be separated depends, of course, on the enemy capabilities, the terrain, and our own mission. Just as the Company A group was supported by the artillery battery at Sinbani, the company groups can be supported by the battalion's atomic weapons in both attack and defense.

5-Company Battalion

Each headquarters should control and provide support for as many subordinate elements as feasible in order to reduce overhead and cut down time required to get out instructions. For this reason, a five company battalion is used in the attack and defense ex-

amples (Figures 4 and 5). The size of the areas depicted for the battalion in Figures 4 and 5 have intentionally not been indicated because this will be dependent on the factors discussed earlier. However, they probably will be in the neighborhood of 10,000-yard squares.

In the attack (Figure 4), when enemy forces can be definitely located (and we must remember they will shift positions frequently too) they will be hit with battalion or higher level atomic weapons. This type of combat will be open warfare at its best. Company groups (less tanks) or platoon task groups will move by helicopters to isolate forward enemy units until they can be destroyed. These airlifted units may well attack enemy elements from the rear at the same time they are attacked from the front. When enemy reserves mass to counterattack, atomic weapons are used against them.

The battalion objective area will be relatively large because the enemy will be deployed broadly and our battalion must have a large area for deployment. After a successful attack the battalion would have destroyed the enemy in the

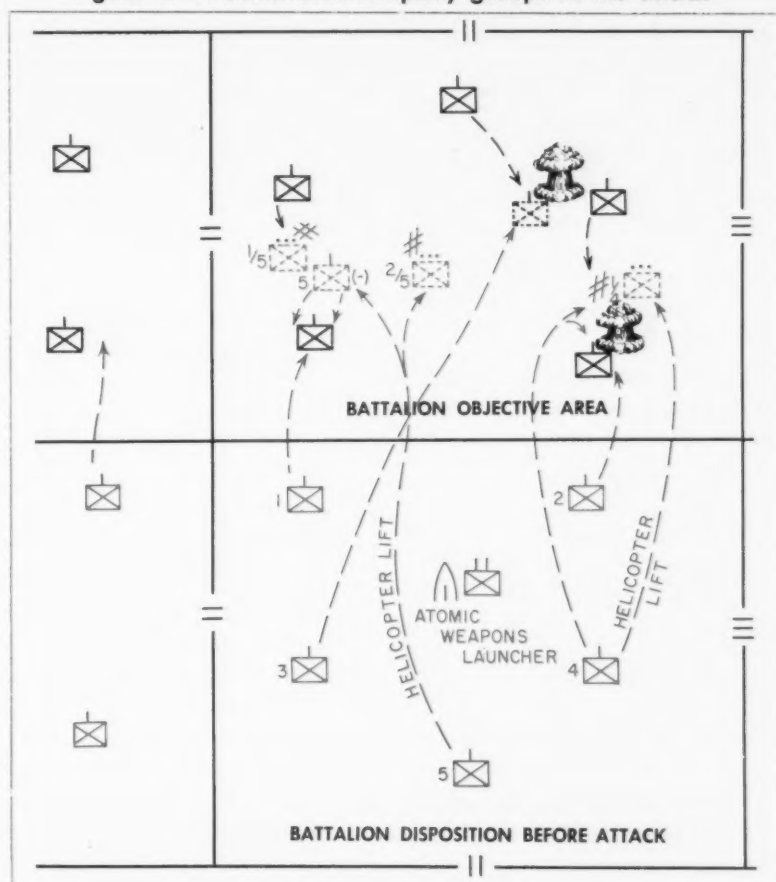
objective area (Figure 4) and be disposed to protect itself while controlling the area. Fire and maneuver will still be the method of combat. Company groups will be massed only when necessary to overcome the enemy.

Much More Depth in Defense

In the defense, units at all levels must be disposed in much more depth than in the past (Figure 5). The battalion commander is responsible for destroying enemy forces that enter his defense area. If he cannot destroy the enemy, he must contain him within the battalion area so the higher commander can destroy him by counterattack. The battalion will accomplish this mission using company groups supported by atomic weapons through a combination of defensive, offensive and retrograde actions.

Keeping in mind the principle of opposing the attacker with minimum forces initially, the battalion would probably only deploy two company groups forward (Figure 5). These forward groups would prepare blocking positions on suitable terrain (B in Fig-

Figure 4. A battalion's company groups in the attack



ure 5) and then send much of their strength forward in smaller groupings (A in Figure 5). The mission of these groupings is to oppose the enemy with long-range fires including atomic weapons to inflict casualties and try to force him to mass and form atomic targets. Reserve company groups may be used to attack the enemy at this time in conjunction with atomic strikes, or to occupy a series of blocking positions (C in Figure 5). Forward elements might be withdrawn quickly to positions in the rear, atomic weapons then placed on the enemy, and reserve company groups used to complete the enemy's destruction.

The battalion and company group commanders must be relatively free to fight their own defensive battle within an area rather than be tied down to a specific terrain feature. If a unit sits too

long, it will be destroyed by an atomic weapon. If the attacker is so strong that he leaves the battalion no other choice, company groups may occupy a combination of positions (C and D in Figure 5) within the battalion defense area pending counterattacks by higher echelons or orders to withdraw from the area. Once the attacker closes with a defense position the defender must make every effort to keep close to him since the enemy probably won't use atomic weapons that endanger his own forces.

THERE are many considerations other than how we may attack and defend using company-size combat teams. Army aircraft will work closely with company teams to provide information of the enemy and our own dispositions. Very small reconnaissance-type helicop-

ters that can be folded and carried on jeep trailers should be organic to the battalion to work with separated companies.

Range, weight and reliability characteristics of radios for ground and ground-to-air use must be improved to insure control and coordination of separated teams and the delivery of supporting fires.

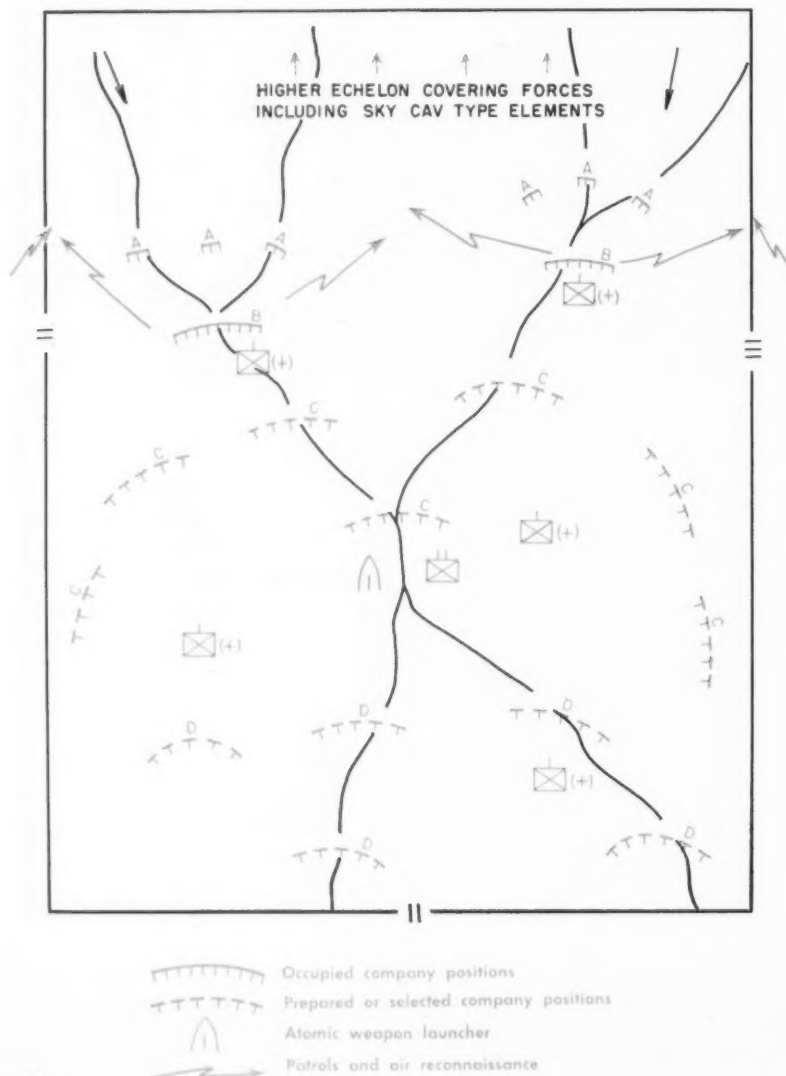
Resupply and Evacuation

Resupply and evacuation for company teams can be solved in part through the use of helicopters. Realistically, however, most of the traffic between battalion and company will be on the ground. To accomplish ground resupply and evacuation it will frequently be necessary to fight enemy groups that have straddled the routes between the company and its sources of supply. This may require formation of small supply units with armored personnel carriers and weapons to allow them to "fight" the supplies forward and the wounded back. When helicopters are used for evacuation, the wounded will go directly to medical facilities as far away from the enemy as possible. It is likely that kitchens and hot meals from the rear will be a thing of the past; they impose an unnecessary load on our small mobile combat groups. Packaged rations similar to our 10-in-1 will permit heating of food in squad or team groups. Garrison kitchen personnel will become available for our "fighting supply units."

This fluid type of war presents the small-unit commander with almost unlimited opportunities for maneuver, deception and initiative. Mission-type orders to company-size units mean freedom of action for subordinates—and thoroughly competent small-unit commanders.

PROBABLY the greatest problem we face today in fighting such a small-unit war lies in flexibility of mind at all levels. The small-unit commander must be given responsibility for a mission, the means to do the job, and then be permitted to do it. This assignment of responsibility and delegation of authority must be practiced in day-to-day work—otherwise it won't happen when the chips are down. Commanders of all ranks must realize that in fluid war, regimental, division and corps commanders will be too busy with their own tasks to run the companies. The small-unit commanders' war is with us. Let's prepare ourselves for it.

Figure 5. Battalion's company groups in defense



Senseless massive destruction closes the minds
of men and makes it impossible to achieve
the true objectives of war which are political

The Purpose of Force

Colonel David L. Edwards

ADVANCING technologies and expanding cultures have dictated many changes in the way men wage war but throughout the ages the one constant has been that ultimate objective of war is political in nature. Today misunderstanding of the real objective of a war between the Communist and free worlds has resulted in the over-use of such terms as "national security," "survival" and "massive retaliation." Military men should never forget that military objectives must be selected and achieved in the light of the ultimate political purpose.

The military objective, in any war with the Soviet bloc, should be to defeat the Soviet military power to the extent required to impose our political will upon its populations. This can be accomplished, according to one's concept of war, by bombing, by guided missiles, by blockade, by land armies locked in combat or by a combination of these means. Most of us believe that a combination will be required.

Manned air power or guided missile systems delivering thermonuclear weapons can make a desert of any land and is an extreme method of achieving a military objective with complete disregard of political purpose—unless the idiotic creation of a wasteland should

be the political aim of an aggressor.

We have learned much about war and peace since 1945, and it isn't too early to study the philosophical soundness of World War II decisions. Three critical decisions are well known: the unconditional surrender policy of 1943; the direction of the Allies' main effort in Europe in 1944; the seizure of Berlin in the spring of 1945.

The meaning of three World War II decisions

The decision of the U.S. and Great Britain to demand unconditional surrender left the Western allies, less the Soviet Union, unprepared for the political vacuum that existed in the wake of German defeat. That the Axis was a political structure doomed to collapse as soon as its military shield was destroyed was disregarded as was the fact that its ungoverned populations would continue to exist as a gigantic conglomeration of social, economic and political problems.

History discourages any thought of crediting Stalin with surreptitious support of unconditional surrender out of forethought of the advantages that would accrue to his ambitions. In any case, it is reasonable to assume that the

Soviets, who regard Clausewitz as their mentor of military philosophy, appreciated the wartime geopolitical naïveté of the West. This is substantiated by the political events that followed unconditional surrender.

The second critical decision, the invasion of the Continent through Normandy, was at first opposed by Mr. Churchill, who preferred the Balkans route because of the advantages it offered for establishing a democratic cushion around what would soon become an expanding Soviet Union. "Logistic considerations are more germane," the Americans argued. The Americans won the argument. The invasion was made across the English Channel, but the political objectives of the Balkans route were not retained and recast to reflect the West European geopolitical situation. SHAEF did not carry the all-important political objectives with it when its armies crossed the Channel. It is true that political considerations entered into selection of the final line of advance of the Western allies; but military considerations were paramount. The Soviets placed political considerations first, and their lines of advance were based on political aims. The Western allies could likewise have specified political objectives for their

military to accomplish. Whatever these might have been, the power existed to accomplish them, but the opportunity was missed. The politically conscious strategists of the Soviet Union gained the political advantage, and today all Europe east of the final line held by the Western allies is Communist (except part of Berlin).

THE third decision led to the West's foregoing the seizure of Berlin before Soviet infantry could gain this strategic objective. This was a purely military decision. It was based upon the probable cost in terms of Western casualties. The decision was significantly devoid of consideration of the political or the geopolitical implications. The responsibility was passed to the field by the Combined Chiefs of Staff on the premise that it was purely a military decision.

Was this purely a military decision? It was acknowledgedly a strategic decision. Can any decision of strategic significance be purely military? One must not be diverted from realism by the term "military." The military is not a state apart from its nation; it is the nation, in arms. The military cannot make peculiar and private strategic decisions that will not affect the nation. The nation is a political structure. Strategic decisions affect the nation; therefore, they must have political meaning. When translated into action, a military decision of strategic impact will have political implications. What matters is whether these implications are foreseen and form a part of the reasons behind the decision, or whether they are ignored until they force attention through the normal course of events.

Total destruction nullifies possibility of achieving political aim

Today, as if ignoring a sound philosophy were not enough, the Western world listens to several philosophies of war which degrade the political objective. For example, any philosophy which supports indiscriminate destruction or total destruction does, in effect, demand unconditional surrender. A philosophy which offers no option can only be unconditional in its purpose.

Is a war fought under this philosophy capable of attaining a political objective beyond the military objective? In particular, could it meet the requirements of the West in event of a war with the Soviet Union? Before answer-

ing that, the USSR must be subjected to analysis and our political objectives must be selected.

MACKINDER said that Russia is the key to the world heartland and that he "who rules the heartland rules the world." Maybe the Soviets believe him. The Nazi leaders, schooled by Haushofer, believed that the heartland was essentially Germany and the Ukraine. There are many elemental truths in the heartland theory; but technology has caused shifts in geopolitics as well as in war and the heartland theory has been challenged. Air power and sea power in the nuclear age have replaced nautical miles with time measurements. Exterior lines begin to have advantages that once were the monopoly of interior lines; for example, maneuver, mass, surprise, economy of force. Disadvantages inherent to allied combinations have been eased by modern communications devices. The heartland has become an impact area.

Physically, the USSR is the world's largest nation. It stretches from the Baltic to Bering Strait. Every climate except tropical is experienced within its borders. Natural resources and raw materials abound. Oil and mineral developments are increasing steadily. The Soviet population is increasing at nearly two per cent a year. This will give the USSR a decided manpower edge over the Western allies within ten years under the principle that national manpower need not be equal in number to that of an opposing alliance in order to exceed it in effectiveness. However, to achieve this advantage, the USSR must make great gains in individual productivity.

Agriculture has always been a Soviet problem child. The peasant farmer prefers to work for himself. This irritated the overlord and today irritates the Presidium. There is a widespread opinion that the USSR could not have gone to war in 1955 if she so desired

because of food straits caused by failure of production. Reliance on agriculture is placed on the large cooperative farm of many thousands of acres. Under Communist theory, the larger the farm the greater the opportunity for production because of the increased capability to supervise, organize, and inspect the farming efforts of the people. Production effectiveness is measured by Western standards in terms of acres per man. The Soviets understand that. Hence, the chagrin of the Soviet farm officials who visited the United States in 1955 upon learning that the American ratio of acreage per man was superior to that of the Soviet system. They could not possibly understand that the reason for the difference was that they have a state where the individual has a drillfield incentive instead of a natural incentive born of political freedom, economic and social sovereignty, and spiritual inspiration.

THE USSR is becoming more industrialized each year. Production is turned back into capital production, thus pyramiding industrial growth. War matériel is manufactured in tremendous quantities, consumed by forces in being, donated, loaned or sold to allies and satellites, and stockpiled against requirements for general war. Heavy industry is concentrated geographically to the same extent as it is in the central and eastern United States. Emphasis is definitely on heavy production rather than on consumer goods. For a short period during the incumbency of Malenkov, there was a trend toward consumer goods, but that is not likely to reappear despite vocal soundings and press reports to the contrary.

Soviet economy is controlled completely. The ruble has an artificial peg. There is no national debt, because controlled inflation or deflation is too effective an instrument to keep idle when a debt requirement arises. This will

Colonel David L. Edwards, *Infantry*, has had wide command experience in infantry and armor, most recently with the 22nd Infantry in Germany. He has served on staffs at Army Ground Forces (now CONARC), in USAREUR and in G3. During World War II he commanded an Army battalion attached to the Marines during the Marianas campaign. Graduation from the National War College in 1955 completed a round of schooling that started at The Infantry School in 1939. Colonel Edwards is on detail from the Army to the Office of Defense Mobilization. He wrote three articles for the *Infantry Journal*. "What Use is the Helicopter?" (July 1941) forecast the practical military potentialities of helicopters—forecasts ratified a decade later by operations in Korea.

be true so long as the government owns all industry, agriculture, business and commerce, except very small businesses and some professional practices. Checks and controls on private income are too numerous and autocratic to allow for a situation unfavorable to the government.

Religion in the Soviet Union is publicized out of proportion outside of it. There is no truly effective religion in the USSR, and to accept a contrary view offered as fact is to deny that religion is the most feared and hated enemy of the Communist Party. There are inevitably remnants of pre-revolutionary religion; after all, the revolution took place only thirty-five years ago. One cannot say that religion exists in the USSR by stating that Dialectic Materialism is the Soviet religion. To use the word "religion" implies, at least, acknowledgment of a superior being or spirit. To most of us religion means acceptance of a Supreme Being.

The disappearance of spiritual and ethical values

Dialectic Materialism is the extreme opposite of this. It is the philosophy that a material basis rather than a spiritual or ethical basis should be attached to interpretations and values. Communism, and the particular values that are required to support it, cannot exist in a world whose values have a spiritual or ethical beginning. Hence, Marx said, religion "is the opium of the people." Hence, the closing of churches and the persecution of the clergy and religious laymen, the denial of God and the complete atheism of the Soviet political structure.

The Soviet peoples are generally imagined to be clumsy, dull, gross-featured and suspicious. We held equally naive impressions of the Japanese before Pearl Harbor. An easy calibration with which to estimate the Soviet peoples is to look at the ships, airplanes, nuclear weapons, heavy industry, and their production of scientists and engineers. While the quantity and the quality are not equal to the United States in most instances, one should ponder the relative position of the remainder of the world. In short, the biggest competition that the United States will have in the foreseeable future is the Soviet Union. On the other hand, consider the people not as producers, scientists, or technicians, but as personalities. They are truly ignorant in a worldly sense. The effects of re-

interpreting the humanities to incorporate Dialectic Materialism have blunted the personality of the Soviet citizen toward the values of everyday life according to Western ideals.

Self-expression is prohibited whether it be in art, music, literature or speech. All expression must conform to the philosophy of the state. Speech is guarded, selective and conformative. In these circumstances, there can be no advance in the values of humanity except at the rate of advance of the basic philosophy. Inasmuch as amend-

the Soviet Union; but, for the good of the state, anything goes!

Dialectic Materialism was imposed on Russia by Trotsky and Lenin with threat, terror, force and death as the weapons. School teachers were indoctrinated by rote. School texts were rewritten. Literature that conflicted was burned. Children were encouraged and rewarded to report teachers, parents and friends for departures from the prescribed drill. Exile, imprisonment or death were the usual punishments; disgrace the least punishment. The se-



It is the mind of the enemy that is the threat and not his possession of atomic weapons, armies, navies and air forces

ments to the basic writings are unlikely, advance must depend upon new interpretation.

WE could have anticipated the new interpretation of Stalin and his political leadership. But it would be a serious mistake to expect the departure to be in the direction of authentic liberalism. More likely it will be a reinterpretation of philosophy on the basis of current requirements.

While it is true that a Communist can interpret his doctrine according to the situation, the real significance of this is somewhat different. Basic philosophy is not lightly reinterpreted. The so-called flexibility applies to gaining momentary advantage. Flexibility is not a virtue of Communism. Instead, its use is such that it is an expression of the absence of ethical standards. This represents a marked change from Western values where honor is inflexible. Such matters as simple truth and honesty are appreciated privately in

cret police enforced obedience to the new culture.

How has Communism advanced and maintained itself? By the sword. Except for Albania and the tiny state of San Marino, no state has ever come peacefully under the mantle of Communism and remained there. Military force was always the means. During the *Putsch* of 1948, the threat of invasion by the Red Army poised at the border forbade Czechoslovakian resistance to the seizure of the government. The vast majority of the Soviet peoples have had no opportunity to compare objectively Western and Communist philosophies. The Iron Curtain exists to maintain this condition. Communism cannot afford to allow its governed populations to make comparisons.

The Soviet people are deluded through no fault of their own. To destroy the people, to kill the judges, to burn the schools, will not kill Communism. It must be exposed and destroyed in every particular.

The national objective of the United States

The basic objective of the United States is referred to as the national objective. Any political objective of the United States has a lesser order of magnitude and must, therefore, be compatible with the national objective. The national objective is not hewn into stone or marble. It is doubtful whether a national objective has been consciously adopted by the people. Most people like to say it is contained in the Declaration of Independence: "Life, Liberty and the pursuit of Happiness." For our purpose let's assume the following to be the national objective of the United States: "To maintain the security of the United States, to preserve its basic ideals and safeguard its fundamental institutions."

We want to live in peace. Our tradition, however, has not been one of peace. The United States, since its Revolution, has started most of the many wars in which it has been involved. Today, however, the atomic weapon has brought a logical public desire for peace. But there exists the government of the USSR, which lives by a philosophy that demands the communization of the world.

Since the Soviet peoples are not educated to support Western democracy there would be no liberal-minded Russians to whom the Western world could at once entrust the political direction of the USSR if it were defeated in military action. Thus the political control of the Soviet Union without continuing Communism would be a stupendous problem.

The first step is to release the peoples of the Soviet Union from their present political rulers. This action need not be military in nature if some other means can be employed. Military action is, indeed, the last resort.

After this first step is taken, the Soviet peoples must be encouraged to rid themselves of the Communist philosophy. This entails the purposeful re-education of the Soviet peoples.

The next hurdle would be the big one. A new political philosophy, diametric to Marxism, would have to gain the acceptance of the Soviet peoples. This program might require decades of laborious enterprise.

Our political objective boils down to this: "To release the peoples of the Soviet Union from the incumbent political authority, and re-educate them into demanding a political philosophy

under God that recognizes the supreme importance of the individual."

Thus, the national objective of the United States as to Russia is traced to a practical political objective. Since the purpose is the attainment of political objectives, the question we must ask is what are the political limitations of the military?

When war is blindly destructive it is misdirected

To regard war as simply an instrument of destruction is a serious mistake. Not that war is not the most destructive of all man-made conditions, but there is more to war than that. It is a political instrument. The destruction created by war should be only a by-product. Some wars have had comparatively little destruction, and yet achieved large political ends. On the other hand, some wars have been extremely destructive and yet failed to accomplish or even to remember the political objective which caused the resort to arms. This happens whenever the political objective becomes blindly subordinated to destruction for destruction's sake.

When destruction becomes total, nonselective and complete, war has lost its political purpose.

If it is accepted that part of our national objective is to maintain our security, we must know what threats to that security exist. Is the atomic bomb a threat, or is the genuine threat the mind of its potential user? The mind of the user is the threat, of course. That is why an atomic bomb belonging to Great Britain poses no threat to us.

If a person were willing to believe that the purpose of war is other than a contest for the minds of men (political objective) he could likewise believe in ruthless destruction. Also, he could agree that mankind could wage war without men, but rather wage a war of instruments of destruction.

If total destruction were an essential part of war, why has the United States found it necessary to help rebuild the torn lands of enemies? Is not this fact a proof that war is for men's minds, and that destruction is a deterrent to the conversion of minds? After all, the rebuilding phase is undertaken after the military objective has been accomplished, and as the political objective—the true purpose of the war—comes within reach.

The national objective of the United States includes the preservation of our

basic values and fundamental institutions. Would it be possible for the United States to safeguard its security by employing weapons of unlimited destruction and still to preserve its all-important values and institutions? Perhaps there can be a compromise which will allow both, such as a minimum use of unlimited destruction and maximum use of selective destruction.

In any war that ever amounts to more than a pyrrhic victory the victor must occupy, dominate and control the homeland of the loser. This is absolutely essential. A militarily defeated country which is free to act because of no controlling occupation will soon become a threat again. Can peoples' minds be swayed by the sight of a ship at anchor, a plane winging high overhead? Temporarily, perhaps, but that is all. The most politically significant symbol of defeat is a soldier of the conqueror seen from the window of one's home.

Assume that a city of 100,000 has a pro-American population of 75,000, an anti-American population of 20,000, and a neutral element of 5,000. How can an airplane influence the situation? What, physically, can airplanes do to influence and control one quarter of the city's population? There is no way for an air force or a navy (except by sea and air blockade) to influence man's conduct on the ground. The airplane can halt man's conduct by destroying him, but influence it—never.

War is a contest for the mind of man

The purpose of war will remain unchanged so long as man continues to inhabit the earth. War is political, and being so, is a contest for the mind of man. Persuasive force, not dissuasive destruction, is the military objective in order to allow attainment of the ultimate purpose of war—the political objective.

Therefore, the search for a purposeful force in war leads to the conclusions that

¶ A war of arms has as its purpose the imposition of a nation's will upon its enemy in order to obtain a political victory.

¶ The political victory must follow naturally the military victory. Military force must, therefore, be persuasive, and indiscriminate destruction is to be avoided.

¶ A land force is the most politically significant military force.



From *Battles and Leaders of the Civil War*

The Battle of the Crater

COLONEL WILLIAM MARSHALL SLAYDEN, II

*An enormous mass without
form or shape, full
of red flame, mounted
towards heaven . . . spread
out like an immense
mushroom . . . everything
seemed to break up and
fall back in a rain of earth,
timbers and mangled bodies*

MORE than a half century before the first atomic bomb explosion Colonel Count Regis de Trobriand who had been commanding a brigade at Petersburg on that fateful 30 July 1864, wrote these words of recollection:

"Suddenly the earth trembled under our feet. An enormous mass sprang into the air. A mass without form or shape, full of red flames, and carried on a bed of lightning flashes, mounted towards heaven with a detonation of thunder. It spread out like a sheaf, like an immense mushroom whose stem seemed to be of fire and its head of smoke. Then everything appeared to break up and fall back in a rain of earth mixed with rocks, with beams, timbers, and mangled human bodies, leaving floating in the air a cloud of white smoke, which rose up in the heavens, and a cloud of gray dust, which fell slowly towards the earth."

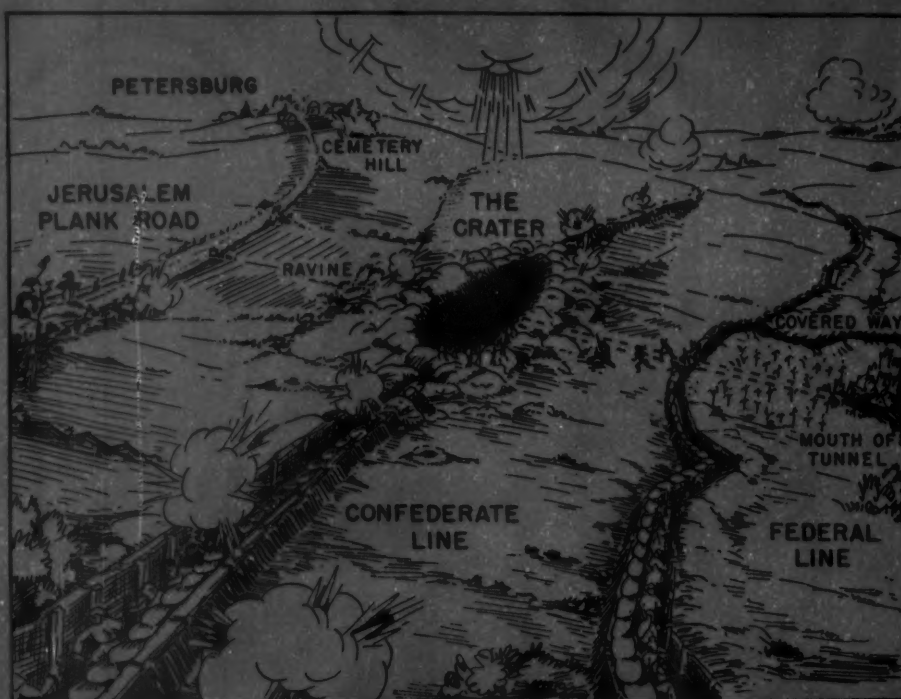
Colonel de Trobriand's description of this tremendous and unprecedented explosion so closely resembles descrip-

tions of atomic blasts that the parallel is striking. Even more striking is the parallel in the tactical use of the Petersburg blast and the tactical use to which atomic explosions will be put in future war.

Many lessons can be learned from tragic events of the past. Although the Petersburg explosion was brilliantly conceived, tactically sound and inherently capable of decisive results, lack of forethought and anticipation of the exploitation phase caused the Battle of the Crater to go down in history as a major disaster for American troops.

Let's reconstruct this massive undertaking of almost a hundred years ago that so closely resembles the use of atomic weapons of today, and see how the past can point up mistakes we dare not repeat.

Though Major General George Gordon Meade commanded the Army of the Potomac in 1864 the presence of the General in Chief, Ulysses S. Grant, in the field caused it to be known ev-



The crater created a gaping hole in the Confederate entrenchments

everywhere as "Grant's army." Grant had been fighting Lee's Army of Northern Virginia "on this line" all summer, meeting defeat after defeat in his efforts to outflank Lee and force his way into Richmond. After the Union's bloody repulse at Cold Harbor, Grant decided to continue his leftward echelonment in an effort to get behind Lee at Richmond and thus cut his supply lines connecting with the south. The Army of the Potomac moved south across the James River and disposed its bulk before Petersburg, with a secure base of supply at City Point on the James. Grant hoped to surprise Lee by this secret move south on Petersburg and compel him to withdraw from Richmond. But here again he was thwarted, and the fighting settled down to siege operations.

Strategic aims stymied by tactical stalemate

The immediate objective of the Army of the Potomac was the capture of Petersburg, which would cut the Weldon Railroad, Lee's main supply road from the south. In June heavy forces had been sent southward in an effort to outflank the Confederate defenses, but they had been defeated

with a loss of 1,700 men and four guns. Now the struggle developed into trench warfare, each side occupying almost impregnable fortifications. The opposing lines were so close and the fire so incessant that it became impossible for men to show a head. Rifles could be fired only through portholes between sandbags atop the parapets, and even then a man had to be careful since patient snipers, beads drawn, fired through the holes at the slightest movement. During the last ten days of June and the month of July, the Army of the Potomac lost more than a thousand men to sniper and mortar fire.

Grant, impatient with the developing stalemate, was prodding Meade for some way to break through and restore maneuver to the war. Major General Ambrose Everett Burnside (IX Corps) felt this pressure also, and it was at this point in history that a brilliant young mining engineer came forward with the idea we recognize today as the tactical use of an explosion to replace a massed infantry attack to breach a strongly fortified position.

The 48th Pennsylvania Infantry occupied that section of the Union line closest to the Confederate works. Less than five hundred feet separated the

opposing forces, strongly entrenched behind abatis and high, sandbagged parapets. Behind the Union line the ground sloped down into a ravine where ran a little brook and what remained of the Petersburg & Norfolk Railroad. On the Confederate side the ground immediately behind the works dipped into a similar ravine, but then rose to a long, rounded ridge, just over the crest of which ran the Jerusalem Plank Road, a broad avenue that led into Petersburg—if it could be reached.

Birth of an idea—and a plan for it

The 48th Pennsylvania came from the Schuylkill mining region, and Lieutenant Colonel Henry Pleasants, its 31-year-old commander, was an expert at mining and tunnelling. It occurred to him that "that God-damned fort is the only thing between us and Petersburg, and I have an idea we can blow it up." Pleasants then drew a rough sketch of his plan to mine the Confederate fort opposite his position and forwarded it through his division commander to General Burnside, who liked the idea and instructed Pleasants to proceed. Burnside then passed the plan on to Meade, himself an engineer.

Meade was not much impressed but he felt it was good to keep the troops busy, and so passed the information on to Grant that Burnside had some men digging a mine "which General Burnside thinks, when exploded, will enable him by a formidable assault to carry the line of works." And so, amid these cautious beginnings and largely because there was nothing else in sight, the Pennsylvania miners began a project which in the beginning got only half-hearted support from the high command and developed later into an operation that involved the entire Army of the Potomac.

Due to the configuration of the terrain, the tunnel was started in the ravine behind the Union breastworks where the Confederates couldn't see what was going on. It was planned to slope upward for good drainage and to extend some five hundred feet to a point immediately under an important strongpoint or fort in the Confederate lines.

That the shaft was ever completed, in the face of such trials and tribulations and the apathy of the high command, is a monument to the energy, ability and tenacity of purpose of Colonel Pleasants. He was later to tell the Committee on the Conduct of the War:

"... I found it impossible to get any assistance from anybody; I had to do all the work myself. I had to remove all the earth in old cracker boxes. ... When I made application I could not get anything, although General Burnside was very favorable to it. The most important thing was to ascertain how far I had to mine, because if I fell short of or went beyond the proper place, the explosion would have no practical effect. Therefore I wanted an accurate instrument with which to make the necessary triangulations. I had to make them on the farthest front line, where the enemy's sharpshooters could reach me. I could not get the instrument I wanted, although there was one at army headquarters, and General Burnside had to send to Washington and get an old-fashioned theodolite. General Burnside told me that General Meade and Major Duane, Chief Engineer of the Army of the Potomac, said the thing could not be done—that it was all clap-trap and nonsense; that such a length of mine had never been excavated in military operations, and could not be; that I would either get the men smothered, for want of air, or crushed by falling earth; or the enemy

would find it out and it would amount to nothing."

By the latter part of July the tunnel was complete and ready for its powder charge. Now operations were temporarily suspended because the Confederates had discovered that the Yankees were mining, and began sinking counter shafts to find it. But luck remained with Pleasants. The Confederate engineers misjudged the direction the tunnel was taking and failed to intersect it. When work stopped, the Rebels could hear nothing and soon the affair became only another camp rumor.

After this pause Pleasants went to work to lay the powder charges. He used four tons—320 kegs each containing 25 pounds poured into the eight open-topped wooden boxes which served as magazines. The magazines were connected by wooden troughs filled with powder, and ordinary fuzes spliced together ran back along the tunnel for about a hundred feet. All that now remained was to light the fuze.

Project completed, but would it be fully exploited?

All, that is, concerning the mechanics of the operation. Pleasants himself had contributed the idea and the masterful energy "to build the bomb." He and his regiment had been the "Manhattan Project." Technically the project had been accomplished. The explosion was ready to be set off. It would be exploited to breach the enemy fortifications and allow the assaulting troops to pass through the breach and turn the enemy's line of works. The further success of the operation lay with the planners in the high command and the commanders of the troops assigned to the exploitation phase.

Such a situation confronts us today. Atomic weapons are ready for tactical use. The fundamental concept—that, possessing the capability of delivering

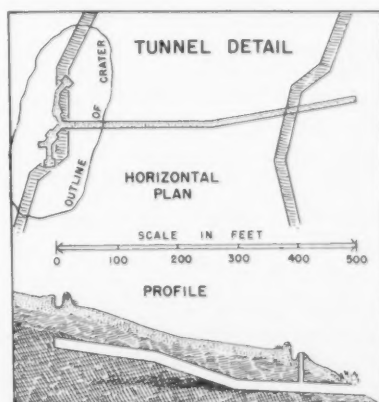
an atomic missile and the resultant tremendous destruction, commanders will be able to blast a hole in heavily defended lines and fortifications which formerly took time-consuming and costly infantry operations—can be appreciated. But are we developing the tactical doctrines, the detailed plans and the mobile equipment needed to successfully exploit the breach created by the atomic explosion? Does our training for atomic warfare realistically anticipate the problems which will face us, and prepare future commanders and troops to take advantage of that fleeting moment when the enemy—shocked, disorganized, confused—is an easy prey to fast-moving, quick-thinking, well-trained exploitation forces?

The Battle of the Crater is of interest to us today because the answer to those questions then were in the negative; the Army of the Potomac did not fully prepare to exploit Colonel Pleasants' break-through weapon. It made some plans, but it made bad mistakes too.

Grant gives full backing to Burnside's "stunt"

Although Grant seemed to have some doubts about this "stunt" of Burnside's, he nevertheless decided that every effort, strategic and tactical, had to be made to put it over. Therefore he decided upon a feint to draw some of Lee's troops away from Petersburg so the task of the Army of the Potomac would be easier. Lee had almost denuded the series of Confederate defenses east of Richmond, so Grant ordered II Corps (Hancock), accompanied by Sheridan's cavalry, to move to the north, crossing both the Appomattox and James Rivers under circumstances where the Confederates would be certain to discover the shift. This feint worked. By 29 July Lee had moved more than half his army north of the James, leaving only 18,000 troops to hold the five miles of works in front of Petersburg, while Hancock, on the same day, began his return to the south under the utmost secrecy to participate in the assault on Petersburg next day.

Meanwhile, Meade had instructed Burnside to submit his plan of attack, and this was done by letter dated 26 July. Burnside, of course, had been making plans during the course of construction of the mine, and selected Brigadier General Edward Ferrero's division to make the assault. Ferrero's was the biggest (4,300 men) and fresh-



est division in IX Corps, and it had not been subjected to the debilitating effects and attrition of trench warfare, so Burnside put it to work training for the event. But there was one considerable in the selection of Ferrero's division: it was composed of Negro troops who had not yet been tested in a major battle.

The entire IX Corps was to be used, and the corps on Burnside's right and left were to assist, with a powerful mass of supporting artillery.

Burnside planned to assault the breach the moment the explosion (set for 0330 on 30 July) occurred, roll up the Confederate line on each shoulder of the gap, and pour through the rest of his force to gain the crest along Jerusalem Plank Road.

The plan was logical, and at first glance it would appear that the operation could hardly fail, particularly since the Federals had surprise in their favor. But twelve hours before the time set for the explosion a series of decisions and actions were made that revealed an utter lack of appreciation by the high command for the problems to be encountered in this kind of exploitation.

Led to disaster by its own acts and decisions

The Army of the Potomac had been led into disaster several times, and most of these occasions can be traced to brilliant leadership by the opposing commander. But not this time. The steps by which it met disaster at the Battle of the Crater were its own acts, reflecting faulty and untimely decisions, lack of forethought and planning, and uninspired leadership.

Meade set in motion the chain of events that ended so tragically. Up to this moment Meade's greatest faults had been his doubt in and non-support of the undertaking. But now, due to Hancock's successful feint directed by Grant, and foreseeing the possibility of a great victory, Meade injected himself blindly and bluntly into the project. Only twelve hours before the moment set for the explosion, Meade

changed Burnside's plans, insisting that he ignore the shoulders of the breach and head straight for the crest of the ridge; Ferrero's division must not be used as the first wave of the attack. He gave no consideration to what little planning and training Ferrero's division had performed for this unprecedented assault. He blandly issued instructions, only twelve hours before an early-morning operation, for an as yet undesignated unit to form in assault columns with engineer parties at the heads of columns to remove obstructions and prepare a way for the artillery to follow. It must have been obvious that the leaders and men of the new unit would have no time to familiarize themselves with the details expected of them in the assault. Burnside objected heatedly, but as chance had it, Grant happened in Meade's headquarters at that moment and upheld Meade. Burnside, distraught by this turn of events, hurried to his own headquarters to enact the next fateful event.

Leadership abdicates to chance—and loses

Burnside called together the commanders of the three white divisions of his corps: Brigadier Generals Robert B. Potter, Orlando B. Willcox, and James H. Ledlie. Burnside seems to have been numbed by Grant's decision, for, after explaining the change in plan to his subordinates, he admitted that he had no reason for selecting one over another to lead the attack, and suggested that they draw lots. It was here—in the realm of chance, which had been allowed to replace reason and responsibility—that Fate dealt the Army of the Potomac a cruel blow: Ledlie's division would lead the assault. In Ledlie himself we find the real trouble. Few American generals have ever been accused of physical cowardice, but Ledlie was one, and his actions on the field next day brought on subsequent court-martial proceedings.

With this abdication of responsibility and authority by Burnside, it appears that the success of the rest of

the operation was also left to chance. Ledlie only casually reconnoitered the route his division must take to reach its assault position, and it was after midnight before his division formed to start its move through the maze of covered ways into the Union breastworks immediately in front of the Confederate fort to be blown up.

Ledlie's division was to advance first and head straight for Cemetery Hill. Willcox was to follow, bearing to the left of Cemetery Hill, and Potter would follow Willcox and bear to the right of the hill. V and XVIII Corps would then pass through and follow up the movement. These orders were known and understood by higher commanders, but time was fleeting and no one seems to have thought it necessary to inform subordinate commanders and troops of the details.

The assault troops arrived at their positions at 0330, the time set for the explosion. Again Fate intervened. The fuze was lighted on time. Nothing happened. After an interval, a heroic sergeant entered the mine to discover the fuze burned out only a few feet from the magazines. A new one was made, and at 0445 on 30 July 1864, the explosion was touched off.

Awe and consternation, confusion and delay

The first reaction of the troops was one of awe and consternation. The Confederate fort broke apart, the earth rose, and a tremendous spout of flame, smoke, clods of earth as big as houses, wrecked caissons and guns, tents, bodies, and general debris went skyward. Fearing a large part of this debris would fall on them, the troops broke and ran for cover. When the smoke cleared, the order was given to advance, but no one had thought to prepare a way for the troops to climb out of the eight-foot trenches and over the sandbag parapets. Valuable time was lost but, most important, organization was lost as each man or small group improvised some means of climbing out of the trench burdened by individual gear. Thus the coordinated charge in line of battle which Meade, Burnside and Ledlie so blandly ordered only twelve hours before, disintegrated into a thin trickle of disorganized men moving forward against no opposition, to peer with intense curiosity at the great smoking crater where the Confederate fort had been.

Now it was 0500—fifteen precious minutes had been lost in getting the

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first men to the crater, a distance of only four hundred feet forward—but Colonel Pleasants' idea had now become a very thorough success. A gap of over five hundred yards wide existed at that moment in the Confederate chain of impregnable defenses. The crater was some 60 feet across, 30 feet deep, and approximately 200 feet long. But, most important, the occupants of the works on each side for several hundred yards had fled in utter confusion. Surprise and shock had left a hole through which IX Corps could roll up the flanks, and take the high ground in rear of the Confederate defenses. But bungling by the high command had destroyed the opportunity.

The engineer parties that were to have cleared the way for the assault columns to pass through the Confederate abatis and entanglements never arrived. They were forgotten somewhere between Meade's order and Ledlie's execution, and since the only gap in the entanglements was at the crater itself, all the attacking forces were forced to pass into or around the lip of the crater. Each man who passed paused for a look to satisfy his curiosity. As an occasional officer urged his men forward, they slid down into the 30-foot-deep crater while pursuing the path of least resistance. Soon the crater was full of confused and disorganized troops, wholly out of control. Officers could not find their men, organization was lost, concerted action impossible. Suddenly the troops in the crater, urged forward by succeeding groups, realized they could not get up and over the forward rim. By 0515 practically all of Ledlie's division was jammed into the crater with Willcox's and Potter's divisions coming up.

Chance for exploitation thrown away by lack-lustre leadership

The golden opportunity for successful exploitation of the great tactical explosion had passed. The Confederate veterans were re-forming after their first shock and confusion. They moved back into the positions on the flank of the crater from which they had fled in terror and which Meade's counter orders had ignored. Firing by the Federals had been light and haphazard, and the Confederates now began to reply. Flanking fire came from each shoulder of the gap and troops were moving into the little ravine behind the Confederate lines. Artillery began emplacing in defilade along Jerusalem Plank Road. The advance of Ledlie's

division to the crest of the hill, which could have been carried at 0500 easily and without effort, now at 0600 could yet be done with great difficulty and at a considerable price. The confusion at the crater cried for inspired leadership and for direction by trained and experienced officers in leading their troops in exploiting the unprecedented advantages gained by surprise and shock of the enemy resulting from the explosion. But Ledlie, the division commander, was nowhere to be seen. He was four hundred yards behind the Union lines, safely ensconced in a bombproof shelter, plying himself with rum. No officer on the scene seems to have risen to the occasion. All were content, like Ledlie, to order the men forward, but none attempted to lead and to see that the plan was executed while victory was yet within grasp.

When the Union troops moved forward some two hours after the explosion the advance failed, incredible as that may seem. Three divisions, the bulk of IX Corps, now attempted to press through the gap, with X and XVIII Corps prepared to follow up. But the explosion that so successfully breached the Confederate line also created a trap for the badly led, slow-moving and poorly prepared exploiting forces. The meager but now fully recovered Confederate defenders poured their fire into the confused mass from hastily reoccupied positions. The crater shoulders which Meade ordered Burnside to ignore now became the closing jaws of the trap, and the crater bowl was jam-packed with disorganized troops without means of escape.

Irretrievable failure followed by stalemate in the trenches

The failure was irretrievable. The fight deteriorated into the same old familiar battle from entrenched positions. But the worst was yet to come. The Confederates, realizing the hopeless position of the Federals and madened by their losses from the explosion, poured steady and withering fire into the hapless troops.

Somehow, finally, after several more costly attacks and the slaughter of almost a thousand men in the crater by the incessant mortar and artillery fire, the battle ended. Long after noon, Burnside was still insisting to Meade that the attack could succeed, but Grant had already recognized failure and was ready to admit it. The men who could do so were ordered to fall back to the Union lines. The others

remained where they were and either died or went off to prison camps. The cost of this lesson in lack of planning and preparation: 3,798 men, over 1,000 of whom were killed.

Perhaps never before had the Army of the Potomac's planning and preparation been so faulty, its commanders in action so uninspired and inefficient, its defeat so ignominious and unnecessary. Grant summed it up in his message to General Halleck in the War Department: it was "the saddest affair I have witnessed in the war. Such an opportunity for carrying fortifications I have never seen and do not expect again to have." In his memoirs he said: "The effort was a stupendous failure. It cost us about 4,000 men—all due to inefficiency on the part of the Corps Commanders and the incompetency of the division commander."

Grant seems to have been unaware of Meade's ignoring, if not actually hindering, the project in its formative and preparatory stage, and his fatal act in sweeping aside at the eleventh hour the plans and preparations of Burnside and the subordinate units for the attack and exploitation. Though the inefficiency of Burnside—even after he received the revised order from Meade—cannot be excused, the greatest fault was that the higher commanders failed to realize that a new and untested tactical operation cannot hope for success unless preceded by careful planning, detailed preparation, and thorough training.

Lesson for the atomic age: Know what to expect and do

This lesson from the past concerns only one tactical concept of the future use of atomic weapons, but it points up the need for knowledge, preparation and training in all the new concepts engendered by atomic warfare. Our service schools must prepare and train tomorrow's planners and commanders in the new concepts, and our training programs must include indoctrination and training in the use of new weapons and their effects. Familiarization programs must be expanded and the aura of mystery surrounding nuclear weapons which are molding new tactical concepts must be dispelled. Surprise, shock and confusion must not benumb our exploitation forces. Every man must know what to expect and exactly what he is to do. This can be done only through knowledge, planning and training, and this planning and training must be continuous.

NO PLACE FOR QUITTERS

COLONEL ROBERT W. HAIN



If you think you're having it tough, how about those unpaid soldiers of 1877?



Let those who would seek the dollar depart and may the Good Lord prosper them

YOU sometimes hear it said these days that we soldiers of today are reliving the experiences of the soldiers of the Roaring Twenties. Those of us who have found good jobs on the "outside" like to tell us we're "crazy not to get out of that rat race and make some money." It may be so.

Or maybe not so. In the 1920s Army service was about as popular as the seven-year itch. There wasn't much to offer the enlisted man. The value of the ration was pegged at a munificent twenty-eight cents a day. Uniforms were "tailored" from cloth that no self-respecting horse would wear for a blanket. Lack of public money, due to the national apathy, precluded doing much honest-to-God field soldiering. Ammunition was so scarce that a soldier could do little more than fire the authorized seventy-two rounds (two sighting rounds) once a year for the record. Civilians sold bonds or worked at something that brought a good income without much effort. This didn't apply to everyone, of course, but the civilian generally lived it up.

Came the stock-market crash in 1929, and everyone knows what happened to the fancy life. The Army might have had the last laugh, were it not for that low blow in the form of the fifteen per cent pay cut (labelled "impounded," and not all ever returned). Even so, there was some compensation for being in the service. You knew where your next meal was coming from, and your pay went a long way in those lean times. At times it was a little hard to stomach the slurs about "overpaid service people."

Then in the thirties came the Civilian Conservation Corps. It planted a lot of trees and made a lot of lasting improvements in our national forests. A good many World War I veterans and youngsters were taken off relief rolls and learned some useful things. The Army did a good job here too. There were a few flurries, like the time a misguided captain tried to teach his lads Squads Right and Left. In the field the CCC was run by Army officers of all components (some Navy and Marines too) who had stayed with the service through good times and bad, mostly bad. These officers didn't make major and lieutenant colonel in eight or ten years, either. They had been lieutenants a long, long time. Some had been captains for over fifteen years.

THIS should bring our more youthful reader pretty much up into the years he can remember. Look back now at the years of World War II, and from there until now. See any comparison? There may be a little in the economic angles. Those who snipe at the Army don't miss a chance to revel in their oratorical and literary freedom. You even have to listen to prattle by those who think the Army is still like what their grannies told them—hell-raising, gambling whiskey-drinkers. There were some fine enlisted men in the Army in those days—some of them later became officers and a few general officers—but on the whole today's Army gets men with far more education and aptitude than their predecessors.

Our officers are excellent, too. Seems they were always good, but now they are even better. The old senior fire-eaters who tried to cover up their own shortcomings by chewing everyone in sight have about disappeared.

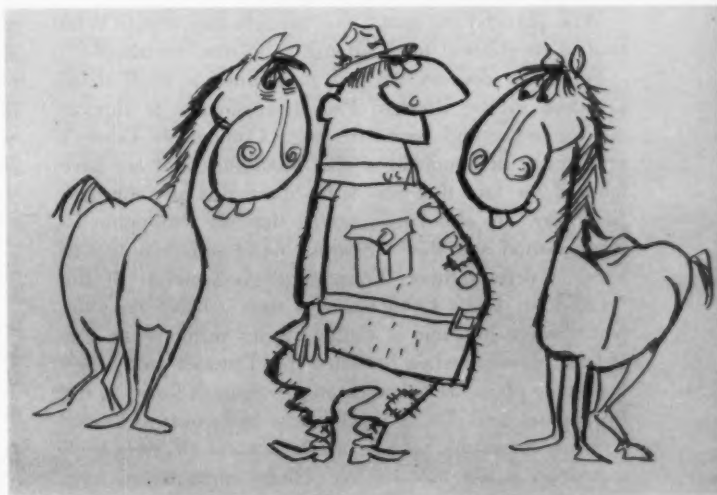
And it is just as well. The new breed leads through knowledge and personality rather than force and gets better results.

There is still plenty of room for improvement. Sure, we could all use more pay, but no one promised us we'd get rich in this man's Army. No one is reported starving, and there seem to be quite a few new cars around posts these days. It would help if each of us could have a decent set of quarters on post, too. Things could be better in a number of ways, and the Army is doing its level best to help in all departments. The topside people recognize your needs and do something about them. No one is being forgotten today; you get an answer in any case. If you think you're having a rough time, think of those Army men of 1877 who didn't get paid for five months, through lack of appropriations. *They* had something to howl about, but the Army kept on fighting Indians and didn't fall apart at the seams. It was used to such treatment. Have we grown a little soft?

THE real hard core of today's Army is quietly doing its job. These are the career officers, warrant officers and enlisted men who stick. This is a tradition and is part of their lives. There is nothing wrong with tradition. It makes the Army solid, gives it stature, provides that strong incentive which makes men fight to win. Tradition is the base, along with accomplishment, that makes our Army proud and our citizens proud of their Army, and upon which the Army and each of its soldiers builds greatness, with victory and heroism as the main materials.

In peacetime, soldiers must prepare for combat. Training may seem dull and monotonous to those without the foresight or patience to realize the Army's ultimate mission; these men may leave the service for something more exciting or more lucrative. Those who know the Army's wartime history and its glorious deeds of peacetime, those men who realize their country's needs and who possess that patriotism which is the prime motivation for service, they are the hard core that will not chip away nor dissolve. These men place love of country above material gain, patriotism above the tendency to escape privation and sacrifice, and service above luxurious living in a modern five-days-a-week environment.

In times like these we are living through, the weak will depart for greener fields and the strong will be strengthened in their resolve to stay. Let those who seek the dollar depart, and God bless and prosper them. The good solid citizens will remain to do a job that needs to be done, and do it well. They will be with us through thick and thin, weathering the petty criticism that is the Army's lot from time to time. They'll live in modest circumstances, sometimes in privation, be first to the scene of conflict when it bursts, and perhaps die in circumstances that are heroic beyond description. Such men will leave their families little except perhaps the benefits of insurance and a good many golden memories. One thing is certain, though: each of these patriots will add something to the bright pages of Army tradition and history. Their children will be proud that their fathers didn't chicken out when things got a little tough.



Uniforms cut from cloth
no self-respecting horse would
wear for a blanket

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THE MONTH'S READING

When Civilian Authority Fails

LOUIS J. HALLE

"1898: The United States in the Pacific"
Military Affairs
Summer 1956

The case in point is Commodore Dewey's famous attack on the Spanish squadron in Manila Bay, with its momentous and unhappy consequences, political and military, for the position of the United States in the Far East. I say "unhappy" consequences, because the attack left us with the Philippine orphan on our hands, and our consequent commitment for its defense has kept us strategically overextended in the Far East ever since.

Who planned the attack that brought this about? Who studied its political implications? Who was consulted?

For many decades we had maintained a small naval squadron in the Western Pacific, apparently to support our commerce and "show the flag." Commodore Dewey's predecessor in command of that squadron could not have ignored the fact that war with Spain was an imminent possibility. He also knew, surely, that the Philippine Islands existed and that a Spanish naval squadron was at hand to defend them. Thus, although Secretary of the Navy John Davis Long was less than reliable on some points when he came to composing his memoirs, he was at least plausible when he stated that Dewey's predecessor had made plans for an attack on the Spanish forces in the Philippines, and that he turned those plans over to Dewey with his command. Such action by a naval officer in such a position is less noteworthy, perhaps, than would have been its omission.

Making plans which may or may not be called for is, however, not the same as making policy. It was not within the authority of the Far Eastern commander to decide whether, in case war came, American forces should undertake any belligerent activities in the Western Pacific. That was for the civilian commander in chief, the President, to decide. But the President, together with his Secretary of the Navy, had no experience in the making of war and was, in any case, focusing his attention on Cuba, which was the only object of our quarrel with Spain.

In a real sense, no positive decision ever was taken to adopt a policy calling for an attack on the Philippines. The President merely found that this was the naval policy that the Navy had in mind, and he seems to have assumed that it must be right. "While we remained at war with Spain," Admiral Dewey later wrote, "our purpose must be to strike at the power of Spain wherever possible." This implication of unlimited war, which might have given a Bismarck pause, was unquestioned among us at the time. The political objective of the war was to liberate Cuba;

but the military objective must be to hurt Spain wherever we could until she cried quits. The western Pacific was one of the principal places where we could hurt her. Given these tacit premises, the naval officers were right in assuming that we would strike at the Philippines in case of war. A special policy decision would have been needed rather to exempt them from the area of our military operations than to include them.

I see no evidence that President McKinley or Secretary Long gave much thought to the policy problems involved, or gave any thought at all to the matter on their own initiative. The Navy Department made preparations for the attack at a subordinate level and almost as a matter of routine. And if there were political implications in such an attack to be considered before ordering it, that was hardly the business of the Navy. The President would be the one to decide that, with the advice of his Secretary of State if he wanted it. But no one raised a question, and no one knew of any question that might be raised.

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The simple fact appears to be that no one, military or civilian, saw any part of the vast political implications in this action. This is attested by the surprise of everyone concerned when the political consequences did immediately follow, consequences that left us virtually no choice but to assume the strategic liability of having to discipline and defend a colonial possession that we did not want.

Defend Freedom or Lose It

ARTHUR KOESTLER

The Trail of the Dinosaur
The Macmillan Company, 1955

The most conventional of all weapons, and the one which no nation can dispense with, is a people determined to fight on the beaches and to fight in the streets in defense of their freedom. However brave they are, they will never be able to stand up against an aggressor using the methods of total war. But if they are strong enough, and brave enough, they will survive because of the aggressor's reluctance to engage in open, total war. The oft-heard argument: "What is the good of arming a few more divisions when we know that in the case of a showdown Europe cannot be defended anyway?" is both cowardly and false. Any European Defense Community can never aim at more than to make Europe unconquerable *short of total war*. But it can never aim at less than this. If, in the early post-war period, Czechoslovakia and Poland had been equipped with the number of divisions and the unbroken spirit of Finland in 1939, the Russians could not have deposed the Polish Government, nor pulled their Prague coup. They would have been forced to show their

hands and engage in open warfare—and the odds are that they would not have dared to take the risk. It is indeed distressingly simple: free men must be prepared to defend their freedom or lose it.

Worth of Armed Militia System

WALTER MILLIS

Arms and Men: A Military History of the United States
G. P. Putnam's Sons, 1956

It was not the backwoods tactics or terrain which was to destroy the eighteenth-century military system; the Revolution was not, for the most part, a backwoods war. It was certainly not the backwoods rifle, a weapon virtually unknown in New England in 1775, and which was not for another three-quarters of a century to develop into a practicable military arm for general use. Primarily, it was the presence in America of an armed populace and of a militia system which, despite its decay in the older seaboard settlements, still represented a living tradition.

Training for Politico-Military Responsibilities

WILLIAM T. R. FOX

Military Representation Abroad
Background Paper for Ninth American Assembly
Harriman, N. Y., 3-6 May 1956

Without the prior development of the various war colleges, it is difficult to see how our military men could have risen so quickly to their new politico-military responsibilities. While conventional diplomacy was and is still being described as an "art," and an art that a gifted amateur can best learn on the job, the professional military man came to recognize that staff work, including the kind that has to be done abroad, is essential and therefore professionally respectable and therefore appropriate for professional training. . . .

The five war colleges set the tone for the intellectual life of the armed services and particularly of those officers with a share in the making of military policy. Specific training for service on combined or joint staff comes, however, in an intermediate training institution, the Armed Forces Staff College.

The armed services, and particularly the Army, have to

ought to be permitted to emulate, no one suggests that our professional military ought to have less training for policy jobs in order to prevent an over-militarization of our foreign policy.

On the other hand, the need for civilians who understand the problems of the military is at least as great as the need for soldiers who comprehend the problems of statesmen, diplomats and industrial mobilizers. The growth of interest and research in military policy in the universities may eventually help to meet this need, but bringing a larger number of professional diplomats and civil servants into the war colleges might meet the existing need more quickly.

War Without Hardship

NICCOLO MACHIAVELLI
The Art of War
1513

Their policy has been, first of all, to deprecate the infantry in order to exalt their own troops. This they did because they had no land and lived on their earnings, and so a small body of infantry could not add to their prestige, and a large body would have been too much for them to support. So they limited themselves to horse, of which a tolerable number would yield them honor and sustenance. Things reached such a point that you would scarcely find two thousand infantry in an army of twenty thousand. Further it was the main part of their policy to do away with any possible cause of hardship or danger; there was no killing in their skirmishes but only the taking of prisoners without expectation of ransom. There were no night attacks on fortified positions nor were there night sallies from those positions against the bivouacs; no ditches or stockades were built around the camps, and there was no campaigning in winter. Such things were permissible in their military code and indeed devised by them, as we have said, in order to spare themselves hardship and risk. In this manner they have reduced Italy to a state of servitude and made her an object of contempt.

Watch What Goes on in the World

ADM. ARTHUR W. RADFORD
Address, Commissioning Exercises
Subi Point Naval Air Station, Philippines
25 July 1956

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where Communism makes gains, dgeheads for future expansions. ommunists swallow up and sub- hey already have annexed territory f fifteen sovereign countries, and auntries slave-colonies. They now uman race, and they openly pro- extend their system throughout

h and every one of us to be con- elsewhere in the world.

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THE MONTH'S READING

When Civilian Authority Fails

LOUIS J. HALLE
"1898: The United States in the Pacific"
Military Affairs
Summer 1956

The case in point is Commodore Dewey's famous attack on the Spanish squadron in Manila Bay, with its momentous and unhappy consequences, political and military, for the position of the United States in the Far East. I say "unhappy" consequences, because the attack left us with the Philippine orphan on our hands, and our consequent commitment for its defense has kept us strategically overextended in the Far East ever since.

Who planned the attack that brought this about? Who studied its political implications? Who was consulted?

For many decades we had maintained a small naval squadron in the Western Pacific, apparently to support our commerce and "show the flag." Commodore Dewey's predecessor in command of that squadron could not have ignored the fact that war with Spain was an imminent possibility. He also knew, surely, that the Philippine Islands existed and that a Spanish naval squadron was at hand to defend them. Thus, although Secretary of the Navy John Davis Long was less than reliable on some points when he came to composing his memoirs, he was at least plausible when he stated that Dewey's predecessor had made plans for an attack on the Spanish forces in the Philippines, and that he turned those plans over to Dewey with his command. Such action by a naval officer in such a position is less noteworthy, perhaps, than would have been its omission.

Making plans which may or however, not the same as making the authority of the Far East whether, in case war came, America take any belligerent activities in was for the civilian commander decide. But the President, together the Navy, had no experience it was, in any case, focusing his a was the only object of our quarrel.

In a real sense, no positive decision adopt a policy calling for an attack. The President merely found that that the Navy had in mind, and that it must be right. "While in Spain," Admiral Dewey later wrote to strike at the power of Spain. The implication of unlimited war, with Bismarck pause, was unquestionable. The political objective of the war

but the military objective must be to hurt Spain wherever we could until she cried quits. The western Pacific was one of the principal places where we could hurt her. Given these tacit premises, the naval officers were right in assuming that we would strike at the Philippines in case of war. A special policy decision would have been needed rather to exempt them from the area of our military operations than to include them.

I see no evidence that President McKinley or Secretary Long gave much thought to the policy problems involved, or gave any thought at all to the matter on their own initiative. The Navy Department made preparations for the attack at a subordinate level and almost as a matter of routine. And if there were political implications in such an attack to be considered before ordering it, that was hardly the business of the Navy. The President would be the one to decide that, with the advice of his Secretary of State if he wanted it. But no one raised a question, and no one knew of any question that might be raised.

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The simple fact appears to be that no one, military or civilian, saw any part of the vast political implications in this action. This is attested by the surprise of everyone concerned when the political consequences did immediately follow, consequences that left us virtually no choice but to assume the strategic liability of having to discipline and defend a colonial possession that we did not want.

Defend Freedom or Lose It

ARTHUR KOESTLER
The Trail of the Dinosaur

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The five war colleges set the tone for the intellectual life of the armed services and particularly of those officers with a share in the making of military policy. Specific training for service on combined or joint staff comes, however, in an intermediate training institution, the Armed Forces Staff College.

The armed services, and particularly the Army, have to be staffed at all times so as to avoid being catastrophically understaffed in war. This means that, except in crisis periods, it is efficient to plan military careers so that as much as one third of an officer's active service career, especially if the officer is marked for promotion to policy-making levels, may be spent in school. Under these circumstances, once the need for a given skill is recognized and an efficient way of developing that skill is discovered, it is relatively easy for the armed services to equip themselves with the new skill.

More than four hundred Army officers have been permitted since the war to complete Ph.D. requirements in civilian universities. Of these more than ten per cent have done so in international relations and foreign area studies. This advanced social science training of a small group of younger officers ought to make them valuable both in Pentagon staff work in the foreign military affairs field and in military representation abroad. Whether or not this training program, in service schools and civilian universities, sets a standard which the Department of State

ought to be permitted to emulate, no one suggests that our professional military ought to have less training for policy jobs in order to prevent an over-militarization of our foreign policy.

On the other hand, the need for civilians who understand the problems of the military is at least as great as the need for soldiers who comprehend the problems of statesmen, diplomats and industrial mobilizers. The growth of interest and research in military policy in the universities may eventually help to meet this need, but bringing a larger number of professional diplomats and civil servants into the war colleges might meet the existing need more quickly.

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Watch What Goes on in the World

ADM. ARTHUR W. RADFORD
Address, Commissioning Exercises
Cubi Point Naval Air Station, Philippines
25 July 1956

What I see is an aggressive Communist bloc stretching from the Baltic to the South China Sea. This bloc has large military forces which are deployed widely and which could strike out in any direction at any time. We should not close our eyes to this.

We know now that where Communism makes gains, these gains become bridgeheads for future expansions. Where they can, the Communists swallow up and subjugate their neighbors. They already have annexed territory comprising all or parts of fifteen sovereign countries, and they have made these countries slave-colonies. They now control one third of the human race, and they openly proclaim their ambition to extend their system throughout the world.

These facts require each and every one of us to be concerned with what goes on elsewhere in the world.



THE TALONS OF THE SCREAMING

EAGLE ARE RESHARPENED FOR THE NUCLEAR-MISSILE AGE

RUN DOWN ON THE 101

FORT CAMPBELL, KY.

BOTH the 3d Infantry and 1st Armored Divisions preceded the 101st Airborne Division as test vehicles for Army nuclear-missile age concepts, but you would never know it from the infectious enthusiasm and optimism displayed here by all hands. Some of this is undoubtedly part of the bubbly animal spirits that make paratroopers such engaging fellows. The outfit is just beginning to take shape but the general attitude here was well expressed by one of its colonels in these words:

"This isn't going to be just a guinea-pig outfit going through endless experiments and tests, and it isn't going to be a chrome-plated Army show piece either. We're going to be in business, but good, when we get to cracking."

The business, as they see it, is to be an active tool in the hands of the makers and executors of national policy. They see the 101st as the first modern military force capable of world-wide selective deterrence to aggression; of being able, as the President once said, to make the punishment fit the crime.

This was written before the presence of the Secretary of the Army and the Chief of Staff gave special significance to the 101st's Organization Day on 21 September, but it can be safely assumed that nothing was said on that occasion to dampen the *esprit* of the growing outfit commanded by Major General Thomas L. Sherburne.

The significance of what is going on here was expressed by Mr. Brucker when he told the national convention of the Amvets that the 101st Airborne Division "will pioneer in the most advanced concepts of organization and equipment. We expect to tailor it exactly to the requirements of the atomic battlefield."

This is evidence that the re-created 101st has the full support of the highest echelons of Army command and staff. Neither is it a secret that the senior officers were selected in the Pentagon. And it should surprise no one that these officers in turn have been more than cursory in selecting subordinate leaders. Few outfits have had the advantages of such meticulous selection, and a not un-realized benefit is the reaction of officers who know they were hand-picked though they may not know just who



Four Sikorsky H-34's—the 101st will have twenty of them—fly in a 106mm recoilless rifle mounted on a jeep, a 75mm howitzer, and their crews at the National Aircraft Show, Oklahoma City



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The Honest John rocket will give the 101st Airborne an artillery weapon far beyond the wildest imaginings of World War II paratroopers

did the picking. Another boost, not common to the reactivation process, was the availability of several thousand trained men from two going outfits: the 187th and 508th Airborne Combat Teams. A year ago these two units were billed as prime examples of Gyroscope. At that time the 187th, which had been in the Far East since early in the Korean conflict, returned to Fort Bragg, N. C., and the 508th airlifted to the Far East in a well-publicized endeavor. Today the officers and men of the two combat teams are scattered throughout the growing 101st. This boost gave it a good start towards its eventual strength of 11,500.

This strength, substantially less than the strength of the airborne division of the Second World War, is in line with present doctrines. But what makes the 101st really interesting is the organization of its fighting commands and the groupings of its combat support and administrative outfits.

The cutting edges of the division are its five **Combat Groups**. Each has five rifle companies and a heavy mortar battery.

These companies with organic and attached weapons will be able to fight as small battalions and capable of semi-independent hit-and-run operations (See "Fight 'em by Company", page 32).

The artillery element of the division consists of five 105mm howitzer batteries and an Honest John rocket battery. The groups will have the air-transportable anti-tank, anti-field fortification M56 90mm gun, 4.2-inch mortars, 106mm recoilless rifles and 81mm mortars. Some of these weapons are transitory and will be replaced by more advanced ones as they become available.

The division is short on ground transport, relying mostly on the light Mechanical Mule. Its pooled organic aircraft

—helicopters and light fixed-wing planes—will substitute for ground transport although the numbers of aircraft are far from excessive, considering the jobs to be done.

Two unusual parts of the new 101st rate more than passing interest. These are the Command and Support Battalion and the Support Group.

The Command and Control Battalion represents an effort to concentrate all of the odd elements of the division under one responsible commander. A result of this grouping is that this is an outfit that has administrative, logistical (incidental only), and combat functions.

The Reconnaissance Troop is the combat element of the Command and Control Battalion. It has a recon platoon, a highly mobile variation of the SkyCav outfit tested at Sagebrush and an infantry platoon capable of deep reconnaissance and of fighting its way into and out of enemy territory. The division will have modern surveillance equipment, including ground radar and a TV camera mounted in an L-20 aircraft.

The Support Group is a unique departure from conventional organization. Its units are organized along functional lines and concentrate on supplying, servicing and maintenance of the division, its equipment and weapons. The Support Group's commander and staff are, in effect, a logistical operations center and works like one.

Ideally the 101st will be a completely air-transportable division. In theory it is that today but to be efficiently so will require the production of weapons already developed—such as the Dart anti-tank, anti-field fortification missile, the 105mm mortar which is reported to be lighter and more easily packaged for air drop than the 4.2-inch mortar. Eventually the 101st may find itself equipped with one-man "flying platforms," not one for every man but certainly

enough for strong reconnaissance purposes.

Obviously the 101st as it will soon be, or as it may become as the new gear appears, will be unable to fight sustained battles. For more than hit-and-run raids and fast security of airheads, the division will have to be beefed up with additional transport and some weapons, although the organic fire power of the division will be so much greater than previous airborne divisions that its need for supporting, armor, artillery and anti-tank weapons may be far less.

The 101st has a lot to do before it will be combat fit. But it is getting there. After a recent visit, its corps commander, Major General Paul D. Adams, was quoted as saying that he thought it was "well on its way" and that he was "looking forward to the rapid development of the 101st Airborne Division into a strong combat division."

The division is not yet up to full strength. It has shortages of skilled men in a number of critical areas and many men are attending various service schools.

Meanwhile the division is seeking volunteers among non-jumpers throughout the Army and is putting them through its own jump school. A temporary Schools Command has been created for the training programs.

Within the combat groups the training program is presently concentrating on squad drill. It is expected that platoon and company training will begin soon. The unofficial goal is to have the division in tip-top shape early in 1957. It will be recalled that during the Second World War it took a year to train a division to the point where it could pass the Army Ground Forces tests that were necessary before it could be shipped overseas. Compared with that schedule the time limit the 101st's own enthusiasts have set for themselves is optimistic indeed.

They'll probably do it. They are that kind of people and they are assured the necessary support.

Whether, as many of them fervently believe, the 101st will then immediately become a weapon of deterrence or will in turn become a cadre for another similar outfit is a subject for speculation. Certainly it can be effectively argued that the U. S. needs a highly mobile, effectively armed and superbly trained corps on alert.

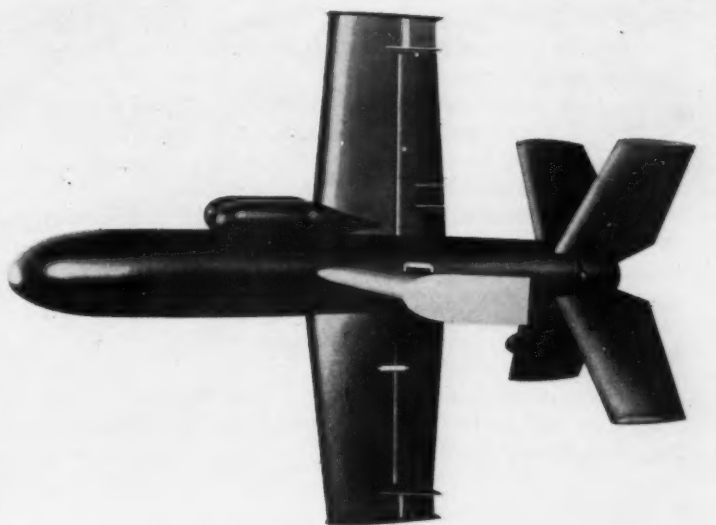
A case in point was the British experience when the Suez crisis first broke. The significance of the lack of British mobile, ready forces was expressed in these words by *The Economist*, an influential British weekly:

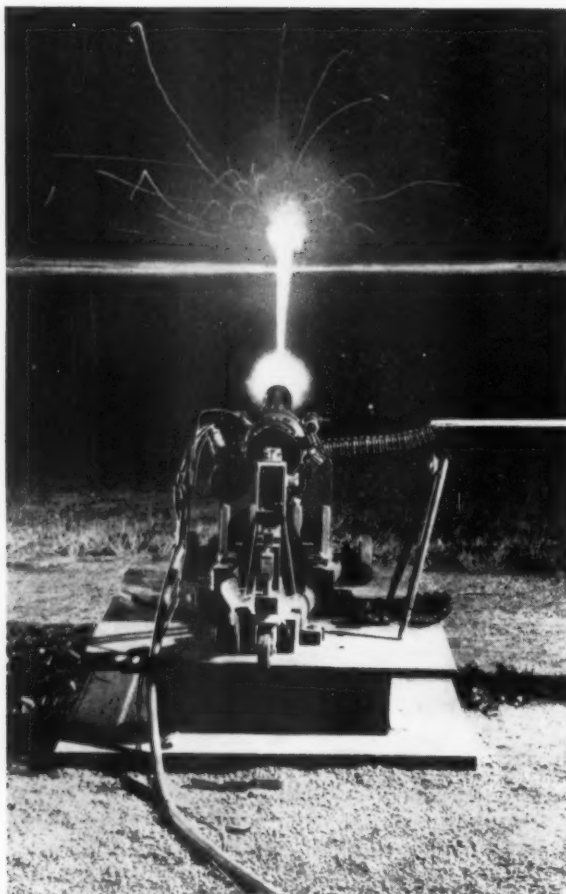
"... the promise repeatedly made at the time of the withdrawal from the Suez and since, that Britain would have an adequate 'little deterrent'—a mobile conventionally armed force ready for immediate emergency use anywhere trouble might arise—has apparently not been kept.

"This is a serious revelation. . . . although Britain's contribution to the great deterrent has not been starved of money, the economies have fallen fatally on the conventionally armed forces in being instead of on the military tail and on low priority projects at home. The military lesson of the Suez crisis is that Britain needs two fully-equipped divisions poised permanently for a quick take-off, as is the strategic air force. . . ."

The U. S. need is every bit as acute. No better instrument than a modernly-equipped, fully-trained airborne corps on constant alert could be devised for preventing what General Taylor has characterized as "piecemeal erosion." Such Army forces are the only instruments capable of deterring or suppressing the "small war [that] may easily lead to the great war which we are all trying to avoid."

The Army Ordnance Corps' DART guided missile is a promising antitank, antifortifications weapon. A missile like this would give airborne units an effective counter to enemy armor.





Army Ordnance and General Electric Company developed this revolving-barrelled, fast-firing aircraft cannon called the Vulcan. In this night shot the barrels are rotating so fast that the stream of tracers seem to be coming out of one barrel instead of six.

THE MONTH'S MAIL

(Continued from page 10)

larly to the subject matter of this session, and the extension courses (37, 38 and 39) leading up to it. Lessons are dated generally 1953-55. Since I took the earlier phases over the years since 1948, I can only hope that some updating of the lessons then in use may have been made.

Without fighting the school solution on any particular problems, I simply submit the following typical situations which served as the basis for both extension-course and active-duty lessons, and ask if they are realistic in the light of today's weapons capabilities. If Major Levin thinks they are, he is entitled to his opinion. To me, they indicate a fundamental error in basic concept: a field army and separate corps operating in Turkey, based entirely on the port of Iskenderun; an army group in France based entirely on Nantes, with negligible use of beaches; same for Cherbourg; clustering major supply and maintenance depots in congested transportation centers, defiles, and cities, such as Paris, Saverne, Orléans; basing all exercises on the enemy's "limited atomic capability," ignoring the obvious fact that our only prospective enemy now has ample capability for mass atomic strikes, and would not be fighting us if he didn't; failing to have the enemy use his atomic capability in the most obviously inviting circumstances, such as those mentioned above, thus encouraging students to think that we can safely get away with use of such installations.

This sums up to a general failure to recognize and stress the vital importance of dispersion as a means to avoid presenting the enemy with a tempting target. In only one problem in the entire course did the enemy strike such a target—a base depot congregation at a traffic center in Kyushu—and he disrupted the entire support of a field army. The rest of the exercise was devoted to damage-repair studies—good training, and a necessary subject. But never was it mentioned that perhaps this near disaster never would have happened if we hadn't created the concentrated depot area to begin with.

I certainly do not challenge the fact that use of established port facilities and centralized depots is much more efficient and economical than beaches and small scattered depots. But efficiency and economy are now obsolete criteria, and I hope we don't have to wait until a few major logistical complexes have been obliterated before we learn this lesson.

Major Levin refers to procedures for revising doctrine, now in effect at Leavenworth, which I am delighted to hear about. Now let's start revising—time's a-wastin'.

MAJOR RALEIGH HANSL, JR.
Bethesda 14, Md.

General Officer Shifts

Maj. Gen. William W. Dick, Jr., to Hq Det JTF 7. . . . Maj. Gen. Willard K. Liebel to Fort Devens, Mass. . . . Maj. Gen. Stanhope B. Mason to CONARC. . . . Maj. Gen. Gordon B. Rogers to USAREUR. . . . Maj. Gen. Robert A. Schow to ACSI. . . . Maj. Gen. Thomas J. H. Trapnell to ODCS/Ops. . . .

Maj. Gen. Russell L. Vittrup to AFFE/8A. . . . Maj. Gen. Robert W. Ward to FECOM. . . . Brig. Gen. Cyrus A. Dolph, III, to OJCS. . . . Brig. Gen. Lyal C. Metheny to Chief, Florida Military District. . . . Brig. Gen. John H. Michaelis to Chief of Legislative Liaison. . . .

Brig. Gen. Daniel A. O'Connor to AAA&GMS. . . . Brig. Gen. Jack W. Schwartz to Madigan AH. . . . Brig. Gen. Thomas D. Stamps to Dean of Academic Board, USMA. . . . Brig. Gen. Paul R. Weyrauch to Fort Stewart, Ga. . . . Brig. Gen. Robert H. Wienecke to OACSI.

Retirements

Maj. Gen. Bryan L. Milburn. . . . Maj. Gen. William T. Sexton. . . . Brig. Gen. Wallace H. Barnes. . . . Brig. Gen. William L. Bayer. . . . Brig. Gen. Harris Jones.

THE MONTH'S CEREBRATIONS

Let's Have More Competition

I REGRET that the Army seems to shun all forms of professional competition except small-arms marksmanship. Oh, sure, we have other contests. Does not the battalion commander glow with pride when one of his men wins honorable mention in the still-life phase of the annual photo contest? Don't we have barbershop quartets, prizes for the nicest dayroom decorations, and interpost baseball games?

I apologize for the bad humor, but the more I dwell on it the more firmly I feel that professional competition, in as many and as varied fields as possible, answers a lot of questions. Special Services types serve a purpose, but we need different and better.

As an artilleryman, all the professional competitions I've ever heard of or seen were comparisons of scores made on annual battery and battalion tests, by two mildly competitive battalions in the same Divarty. Why not organize an annual or biennial artillery shoot, with the best-shooting battalions competing for Army-wide honors at Fort Sill? Competition might begin at battalion level, on up through Divarty (or similar grouping for separate and school support units), corps, army area, and finally to the Sill finals. Three or four of the best from all over the country concentrated there could put on a whopping good show, compete with all the publicity their PIOs could grind out.

Of course, professional competition need not be for Artillery alone; no branch need be left out. Engineers could run bridges across the Potomac against a stop watch; troopers could drop at Bragg or Campbell, to prove which outfit is the best; tankers could have elephantine rodeos at Knox, after preliminary heats elsewhere. Recoilless rifle teams could have a real cool field day at Benning. Army stevedores could stage their competition at some big port, with a public demonstration. The guided missiles people could have theirs at White Sands. I don't know what the CIC detachments could do, or the medics, but a

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little imagination would show the way to them as well as to the adjutants general, JAGs, and MPs, and any other branch I haven't mentioned.

Competitions might be organized on a quasi-commercial basis, with entry blanks, training rules, participant requirements, and the like, with all

branch competitions ending at about the same time—say, around Armed Forces Day, or Army Day, or the Fourth of July. They could be annual or biannual, and need not make a big splash (but big enough to be heard outside the Army Establishment).

What better way to develop the big, obvious asset of *esprit de corps* within units and branches? There is also the favorable publicity that clean competition brings, coupled with family attendance to observe their sons. There is the military advantage of integrating competition into the training cycle, and the added one of a unit learning new procedures, new refinements, from another unit, at practical demonstrations. The opportunity for the trip to the home grounds, won by professional competitive results, is a priceless factor in developing a superior team. The men who wound up winning the finals would be sure *theirs* is the best damned outfit in any army, anywhere.

I hear rumblings from deep within the Army Comptroller's office. I don't know where the money will come from either, but I don't think the idea is a fiscal impossibility. We've all seen funds appear from nowhere before, for projects more and less worthwhile—and we also know that what we want to do, we do. Let's start the ball rolling!

SGT. BEN MOSKOWITZ

THE MONTH'S CEREBRATIONISTS

Sgt. Ben Moskowitz entered the Army in 1951, served with the TC in Greenland and the Military Mission to Thailand. After a year with the 3d Division at Fort Benning he reported to the USAR Training Center in Norfolk, Va.

Lt. Longtimer is the pseudonym of a 1952 USMA graduate with extensive combat service in Korea.

Capt. Hopeful is the pen name of an Infantryman who has contributed several items to ARMY.

Capt. Albert F. Turner, Artillery (USMA 1949), served in Korea with the 99th FA Bn, and as instructor and company officer at the Hawaiian Infantry Training Center. He is a project writer in the Extension Course Division, Department of Publications and Non-resident Training, TA&GMS.

CWO Arthur J. Snyder contributed "Sell the Army From Inside" in the September issue.

Lt. Charles D. W. Canham II (USMA 1951) was a staff sergeant in the parachute infantry during World War II and company officer in Korea and Japan. He is now PMST at St. John's Military Academy, Delafield, Wis.

Reward All the Able

A REFRESHING change, and a boost to incentive for career officers, is the recent D/A message on the selection of outstanding officers for temporary promotion. This new policy, more inclusive than the old five per cent promotion, benefits present and future captains, majors and lieutenant colonels who have earned high OEIs.

Why not a similar plan for promotion to captain of the most qualified junior officers? A lieutenant with four years of service has undergone enough observation and rating to determine his ability compared with others of equal service. Why not then promote the most able of the top five or ten per cent? This step in career incentive

would offer the newly commissioned officer another goal to strive for; he would see the efforts of a small percentage of his contemporaries officially recognized by promotion, and he would strive to place himself in that group.

At present, so far as recognition of ability is concerned, a career as a commissioned officer compares unfavorably with industry. In personnel management a basic principle is that in a given group certain individuals are more highly proficient than others. The corollary (which is practiced in most corporations) is to recognize those who rise to the top of their group.

Of course many years of service were required in the "Old Army" before an officer reached the rank of captain. However, incomes then provided a relatively higher standard of living, even for junior officers. Also, unlike today nearly all families lived on post, where available utilities helped hold down the cost of living.

Recognizing properly evaluated ability will not make the Army soft. Rather, it will serve to attract and hold the higher-caliber officer. Among other factors, present difficulties in filling West Point appointments and the rate of resignation are witness to the need for such a program. To the college student or the newly commissioned officer who is undecided about remaining in service, the prospect of promotion only along with contemporaries, regardless of his greater effort or ability, is far from encouraging.

With competition almost a way of life, the Army with its increasing responsibility cannot afford to ignore its need of high-caliber personnel. The business world offers accelerated advancement for outstanding junior executives. We must too, in order to insure that we keep the highest possible type of officer. If and when the balloon rises to signal another conflict, the contest won't be as between corporations, but between hostile nations. The second best will be the loser.

LT. LONGTIMER

Unearth the Hidden Fliers

WHILE the services weren't looking, thousands of discharged enlisted men and officers invested large portions of their GI-rights funds in learning to fly. Some of them, again wearing the Army uniform, as infantrymen, gunners, tankers, parachutists, or even clerks with no combat experience, are concealing what seems to be in de-

mand at every headquarters from regiment on up: qualified pilots.

A survey of Army units might unearth thousands of fliers hidden under other TOE designations who learned to fly after World War II and before Korea. There they hide, waiting for Army Aviation to discover an extremely inexpensive source of pilots. All they need is a short instruction period to introduce them to the peculiarities of service flying that will earn them the coveted Army Aviator wings.

Let's not miss this boat. The Army has many more pilots than it realizes. They are trained, licensed, and available, but they're hidden.

CAPTAIN HOPEFUL

Take the Flinch Out of Firing

SEVERAL years ago at one of our finest infantry training centers I was given the job of comparing a field service regulation of the twenties and thirties with FM 23-5 on rifle marksmanship. I found that most of the old methods are used today. But we no longer use one aid which I think would go a long way toward improving scores, whether we continue to use the "known distance" method or change to "Trainfire." That aid is to first have the soldier fire with reduced-charge ammunition.

Who are the best marksmen in your outfit? I'll bet the man who makes record on the range had fired a rifle before coming into the service. When he was a youngster his dad gave him a BB gun that had no kick at all. Later he received a .22 which had little if any. When he got to the hunting-rifle or shotgun age he accepted the kick as part of the act of shooting. In other words, he worked up to a big rifle gradually, and was a good shot by the time he got a heavy recoil. He had confidence in himself and in his rifle.

Of course we can't start our trainee on a BB rifle and gradually work up to the M1, but we can let him fire reduced-charge ammo to build up his confidence gradually, just as we used to, at ranges of 1,000 inches, 50 yards, or 100 yards.

The trainee goes out to the range ready to fire familiarization full of confidence and a desire to do well, but is soon disillusioned by a nasty jolt in the shoulder, or maybe a bruised cheek or a fat lip. That beats him. He forgets everything he learned during those long hours of preliminary instruction. He wants to fire that rifle

just as fast as he can, and get off the line. He tightens up and flinches at every round, and even the best coach in the world couldn't correct him.

Reduced-charge ammunition should not be too difficult for Ordnance to prepare. After all, they have done it before. With it the trainee can squeeze rounds off and get very little recoil. Once his rifle is zeroed he'll score fives instead of Maggies. Before long he'll be using all he learned in preliminary instruction. He'll acquire confidence by shooting, because he knows he won't be hurt and thus will never flinch.

Now we have a man confident in himself and in his weapon who knows he can do well. He has lost any fear he might have had. He is master of his rifle. Then give him ball ammo and let him fire familiarization before firing for record. I believe the record fire graphs of training battalion S3s will show a sharp rise. It worked in the "Old Army." Make it work for us.

CAPT. ALBERT F. TURNER

Diversify the MOS for NCOs

THERE is developing at the lower echelon of classification and assignment a hard-and-fast rule of nondiversification of the MOS in the top three enlisted grades. These noncommissioned officers seem to have the idea that their primary specialty is their only responsibility, along with the ordinary requirements that go with their rank, like sergeant of the guard, CQ, and the like. By contrast, a junior officer or warrant officer who might be assigned as commander of a unit or detachment in many cases takes on the additional duties of property officer, mess officer, counselor for personal affairs, custodian of unit funds, motors officer, and many others.

The average E-5, E-6 and E-7 usually carries a secondary related or unrelated MOS, but he is developing a frame of mind, encouraged by practice and regulation, which makes him disregard it. Thus the Army is developing an NCO corps of primary specialists while the junior officer or WO has specialties in addition to his primary MOS.

Noncommissioned officers of grades E-7, and possibly E-6 and E-5, should be given a flexible specialty, in general as follows:

For E-7 a primary specialty of first sergeant, platoon sergeant, section sergeant or chief clerk; a secondary specialty of unit supply sergeant, mess steward, or motors sergeant; a tertiary

specialty combining two of those not designated as secondary.

Grade E-6 should have at least two of the specialties and have one or two years in which to qualify for a third.

Grade E-5 should have a primary specialty and have one or two years in which to qualify in a secondary. Upon promotion he would fall into the E-6 group.

This plan needs study by experts in enlisted career pattern before the TOE and TD concept could be implemented. It would develop a corps of qualified noncoms who could step into officer rank as unit commanders, and perform the duty for which they have the necessary working knowledge. Overages in the top-three-grade specialties would end, and commanders would get NCOs with command potential who in the long run could command a unit or at least supervise a section of it if the need arises.

The plan would be economical from the training end too, for it would create in NCO ranks a sense of command responsibility and awaken in them the knowledge that their experience qualifies them to fill any job required of a noncommissioned officer.

CWO ARTHUR J. SNYDER

Bring the USAR to ROTC

THE PMST of a high school in a town that has an Army Reserve unit can do his cadets, the Army, and the Nation a great service by inducing his cadets (and their parents) to make an early decision about meeting their military obligation.

Don't think the job is so easy that it can be done merely by staging a unit assembly complete with the latest reserve recruiting films and lectures. That's good for a start, but it's only a start. You must personally interview each cadet who is seventeen or over, pry out his innermost desires, and then outline his best course of action. In addition, you must explain to parents the many advantages offered by RFA 55. After the cadet and his parents have agreed that he will join the Reserve unit, don't let it die there. Follow through to make sure he enlists. Set up a suspense system so that in future you will talk to all cadets before they reach seventeen. In short, you must become a recruiter.

After you have built up a healthy atmosphere in your school the job becomes much easier, and cadets will seek you out for information and guid-

ance. While engendering this spirit, the PMST has many opportunities to enhance the standing of his reservists and their unit. By using imagination and initiative he can have young men who are a credit to their families and their country.

If there is no reserve unit in your town, the basic job is the same, except that you must organize the unit. Properly handled, the job is comparatively easy. Here's how we did it at a private boarding school of approximately 350 students.

I got the idea of forming an Army Reserve unit, and consulted the officer in charge of the nearest military district detachment. With the blessing of the chief of the military district, he offered an engineer utilities detachment with a TOE strength of 28. The president of the school authorized its establishment and affiliation with the school, in keeping with his expressed policy of backing any move which leads to preparedness.

Individual interviews were held, and thirty of approximately fifty-seven eligibles were enlisted in our unit between February and June. Letters were sent to parents assuring them that they were not losing their sons, and relating the tremendous opportunities the Army offers for those who are capable and will work for them. Another point stressed was the opportunity to compete for a USAR appointment to West Point.

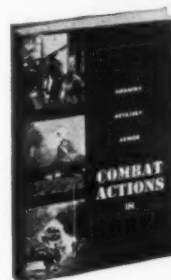
Training was set up for Friday, the only night cadets don't have study hall, and multiple drills were scheduled for Saturday. The first two-week training period was held at Fort Leonard Wood immediately after graduation. With such a program it is possible to complete the yearly drill requirements during the school year.

Because ours is a boarding school, a high personnel turnover is to be expected, and from this standpoint our unit serves as an induction, processing and basic training unit. However, enough local cadets have enlisted to insure that it will be an effective, combat-ready unit if it is ever needed.

So far training has been outstanding, and because we are able to coordinate it with the ROTC program, cadets have acquired much more useful knowledge. Whether they continue in the ROTC program when they go to college or drop out, their reserve service in high school should help prepare them for the future.

LT. CHARLES D. W. CANHAM II

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THE MONTH'S BOOKS

Political Bias

A MILITARY HISTORY OF THE WESTERN WORLD
Vol. 3: FROM THE SEVEN DAYS BATTLE,
1862, TO THE BATTLE OF LEYTE GULF,
1944

By Major-General J. F. C. Fuller
Funk and Wagnalls, 1956
666 Pages; Index; \$6.00

Reviewed by
JONATHAN CARMEN

The final volume of this trilogy* lists sixteen works by General Fuller followed by "etc. etc.," which must be close to British understatement since the *et ceteras* include the three volumes of this truly monumental work. General Fuller is now well advanced in years and it can be said, I believe, that *A Military History of the Western World* is the capstone of a career in military thought and writing without contemporary peer. As long as man studies war we can be confident that Fuller will be read.

In the years since 1914 when his first book was published, General Fuller has demonstrated original thought and courage to speak his convictions. All soldiers owe him a great debt for the vigor with which he swept away cobwebs of military blindness and complacency in such books as *The Reformation of War* (1923) and *Memoirs of an Unconventional Soldier* (1936). His early advocacy of the tank and his development of armored tactics were significant contributions, especially since they came at a time when mobility was lost and surprise and shock action had disappeared from the battlefield.

All of this makes it extremely difficult to find fault with any part of this final volume of an important trilogy on warfare. But it is time the whistle was blown. For too long military reviewers have ignored General Fuller's infection of brilliant military thought with political bias. It is time, I think, for an organ of military opinion to take note of this.

There is risk of oversimplification but it seems fair to sum up General Fuller's political philosophy as expressed in this book and its predecessors by saying that he has renounced those spiritual and idealistic aspirations to individual freedom which had so much to do with shaping the history of Great Britain and the

United States and making them man's best hope for mankind in the 19th and 20th centuries. In the first chapter of this third volume General Fuller disregards the great philosophers of individual freedom and the men of action who maintained and advanced our free institutions (Jefferson and Lincoln are two examples from our own history) to write:

"The spiritual moulders of this age of power were the three Charles—Clausewitz, Marx and Darwin. The first, in his *On War* (1832), expounded a return to Spartanism, which turned the State into a military machine; the second in his *Communist Manifesto* (1848), based his social theorem on class antagonism; and the third, in his *Origin of Species* (1859), brought the whole apocalyptic vision to its summit in his hypothesis of the survival of the fittest through never ending conflict. All three were prophets of the mass-struggle—in war, in social life and in biology."

This is not untrue but it is far from the whole truth. No part of the Western world has fitted this pattern precisely. Germany and Japan came closest to the pattern advocated by Clausewitz; Soviet Russia and its satellites come closest to the Marxian pattern (Socialism as it evolved in the Western world threw off the "class antagonism" philosophy and has long advocated a more moderate program); as to the Darwinian theory—surely General Fuller has here distorted its significance.

It is the part of the truth that General Fuller is blind to that leads him to reject democracies because they are inconsistent and muddle through. The strength free

institutions acquire through controversy, debate, compromise and agreement seems to General Fuller a weakness and a delusion. That such institutions are fallible and have leaders who can make terrible errors—such as Unconditional Surrender, or a temporary blindness to the real iniquities of Soviet communism—is unfortunate but the absolutist governments of modern times have made more serious mistakes.

Because of General Fuller's great contribution to military history, because of his courage and forthrightness, because of his ability to relate tactics to technique in clear and vivid language, one could wish that his view of the motivations and aspirations of peoples and their governments was less out of joint. One wishes that instead of repeatedly damning Churchill and Roosevelt, Marshall and Eisenhower for their mistakes, General Fuller had given more than short shrift to their great accomplishments and undeniable devotion to the cause of freedom.

General Fuller has a right to his opinions and a critic has a right to point out how wrong-headed they seem to him to be. That is what I have tried to do here within the limits of allotted space. In my opinion future generations will be grateful to General Fuller for the clarity with which he describes complex military operations and the evolution of military techniques and tactics. But at the same time they will be terribly misled if they accept his judgment of political events.

Words to Persuade

THE UNITED STATES AIR FORCE DICTIONARY
Edited by Woodford Agee Heflin
Air University Press, 1956
578 Pages; \$3.00 (For sale by the Superintendent of Documents, GPO, Washington 25, D. C.)

Reviewed by
COL. S. LEGREE

This is indeed an unusual and interesting official document. An official Air Force dictionary, the Preface says:

"... But a person uses his language for other purposes than communication. He uses it to think by and persuade... when his purpose is to persuade, he finds that exactness of expression is not necessary to his purpose. Instead, words and phrases are used for their connotations, for their appeal to private interest, or for their emotional impact.

THE MONTH'S REVIEWERS

Jonathan Carmen is a Washington journalist who has written on military subjects for many years.

Col. S. Legree is the pseudonym of an artilleryman who has contributed many reviews.

Lt. Col. Paul M. A. Linebarger is on the staff of the School of Advanced International Studies, and is a consultant on psywar to the Department of the Army.

Col. Frederick Bernays Wiener, JAGC, USAR, a Washington attorney, has been a contributor for over twenty years.

George J. Stansfield is reference librarian at the National War College and book review editor of *Military Affairs*.

*Vol. 1, "From Earliest Times to Lepanto" (1571), reviewed in January 1955; Vol. 2, "From the Spanish Armada (1588) to Waterloo" (1815), reviewed in July 1955.

"... To know how to read and use this language, how to interpret it in context, how to exploit and refine its imagery, how to resort to its deeply rooted connotations ... to know these things is to know how to make the language serve us not only in military life but in all our relations with our fellow men.

"... This analysis had two objectives: First, to discover the meanings of the words and phrases used in conducting Air Force business; and Second, to provide guidance in their use so as not only to keep them in harmony with the English language as a whole but to make them serve Air Force purposes. ..."

Now that we have a frank statement that the purpose of this work is to make words serve Air Force purposes (George Orwell had a name for it), let us examine some of the word definitions.

"Air freedom. Freedom to operate in the air in accordance with a purpose or objective.

"This freedom may depend upon having the kind of equipment required for the purpose as well as an understanding of air power. In war operations, freedom may be limited by a limited concept of air power, as well as by an inferiority in tactical strength. See control of the air, note."

"Air power. Also airpower, n.

Trends favor spelling this term as a single word, but the more conservative two-word spelling is normally used throughout this dictionary.

1. That power that arises from man's ability to fly in a vehicle or to cause a vehicle to go through the air or through space, and to exploit in lesser or greater degree the complex relationships that result from this ability, as in 'to understand air power is to lay the foundations of peace.' See note.

In this sense, air power is essentially a phenomenon, the nature of which has certain inherent attributes or characteristics. Its full exploitation and use depend upon the soundness of man's concept of it. It emerges from three quite different abilities. The first of these is the ability to fly. The second is the ability to evolve new tactics, strategy, and methods of transport—all based upon hitherto unrealized speeds, range, mobility, and flexibility. The third is the ability to turn these first two abilities to account in political, diplomatic, military, cultural, and economic affairs.

In the third of these, the 'ability to do something in the air' (Mitchell) depends upon knowledge of certain laws of science coupled with inventiveness, adaptation of raw ma-

terials and industrial plants, development of suitable fuels, and mastery of the techniques of aircraft control, air navigation, maintenance, etc., to the end that flight is achieved with greater ease and efficiency. In the second, the ability depends upon understanding and exploiting certain dynamic relationships and principles that arise from new speeds, flexibility of movement, elimination of geographic barriers, etc. In the third, the ability, akin to the ability that gives dominion or sway to a farsighted leader, depends upon recognizing and exploiting the political, diplomatic, military, and economic opportunities opened up by the development of the first two sources of this power. See power, n., sense 1.

2. An instance of this power as it exists in a particular nation, as determined by the development of the factors from which it derives, including military, commercial, and private aviation, as in 'air power in the US, as well as in Britain and France, emerged as individual persons, private firms, and government agencies or bodies acted either separately or together to advance aeronautical knowledge and practice.' In this sense air power may be made an instrument of national policy, exploited either in peace or in war.

3. This power adapted to military ends, i.e., the power which a nation may use in war against another nation or nations, based upon a national weapons system organized about air forces.

In this sense, 'the ability to do something in the air' has special reference to the use of the national weapons system to deliver firepower through the air. As such, this power helps define the objective, and provides the particular means for achieving it, as through the special capabilities inherent in an air force for mass or concentration, flexible movement, surprise, security, and delivery of firepower. This power implies the ability to use force. It is an instrument of national policy, and is small or great in proportion to the leadership and vigor of the air force, its physical equipment, its doctrines and concepts. See strategic air power, tactical air power. It is in this sense, as well as in sense 4, that many persons responsible for AF doctrine tend to restrict the use of the term 'air power.'

4. transf. That part of the military establishment of a nation made responsible as a single organization for the principal employment of this power; in the US, the United States Air Force. This sense and that of sense 3 are common in AF doc-

trinal literature.

In this sense, physical objects, i.e., air vehicles and facilities, together with the personnel, skills, and organization required to employ these physical objects, are identified as air power. Air power in this sense is considered as an indivisible entity and under the operational control of an air commander, the whole and each part of the whole being employed in such manner as to maintain the integrity of the whole and to provide a single instrument for operation in airspace.

5. Military aircraft or the units of an air force, as in 'air power was assembled for the strike.'

6. The air arm, as in 'the job of air power was to support ground troops.'

7. A nation having predominant strength in civilian and military aviation, as in 'the United States is both a sea and an air power.'"

"Air support. 1. The support or aid given by air units or forces to surface forces or other air forces, as through reconnaissance, air supply, close air support, interdiction, or any other air operation. 2. Specif. Such support or aid provided surface forces under circumstances either where both air and surface forces seek to achieve common objectives by cooperative action, or where surface objectives are not in conflict with air objectives; hence, short for 'close air support,' 'direct air support,' or 'logistic air support.' Attrib., as in air-support aircraft, air-support party, etc.

In sense 2, 'air support' has sometimes been misinterpreted to suggest that ground strategy determines the nature and the timing of the air-ground activity. The airman's view, however, is that a general strategy is the determining factor and that the air-ground activity is essentially one of cooperation. To emphasize this view, such terms as 'air cooperation,' 'air cooperation mission,' 'army cooperation aircraft,' 'close-cooperation mission,' and 'tactical air command' have been used instead of 'air support' or its combinations. Most of these terms, however, have proved somewhat forced, and 'air support' has survived in the specific sense above. In all circumstances of air support, command of AF units remains with the air commander.

See close air support, direct air support, general air support, and support, n. See also air support command, tactical air command."

"Autonomous, a. Specif. Of the US air arm: Having a status and recognition equal to that of the Army

Selected Check List of the Month's Books

This run-down of some of the books received for review during the month preceding our deadline is to give our readers who like to follow current literature a monthly check list of the most important, useful and potentially popular books. Full reviews of some of these books will appear in this or subsequent issues. Any of these titles may be purchased through the Combat Forces Book Service. See page 64 for order coupon and a complete listing of Selected Books for Military Readers.

AMERICAN-ASIAN TENSIONS. Edited by Robert Strausz-Hupe, Alvin J. Cottrell and James E. Dougherty. Frederick A. Praeger, Inc., 1956. 239 Pages; Index; \$3.75. A short study of the tensions that occur between the United States and India, Indonesia, Japan, the Philippines, and Egypt. The book necessarily missed the latest Suez crisis. For students of foreign policy.

CRYPTANALYSIS: A Study of Ciphers and Their Solution. By Helen Fouche Gaines. Dover Publications, Inc., 1956. 237 Pages; Index; \$3.95 cloth, \$1.95 paper. An inexpensive text for serious students; intermediate level.

ETIQUETTE AND PROTOCOL: A Handbook of Conduct in American and International Circles. By I. Monte Radlovic. Harcourt, Brace & Co., 1956. 240 Pages; Index; \$3.95. Bundle this close to Emily Post when you take off for foreign shores. You never know when you might have to speak to a Baron or attend the christening of the daughter of a Field Marshal.

FRANKLIN D. ROOSEVELT: The Triumph. By Frank Freidel. Little, Brown & Company, 1956. 433 Pages; Illustrated; Index; \$6.00. Volume III of a definitive biography on F.D.R. covering in this volume a detailed study of his tenure as the Governor of New York and the election campaign of 1932.

GUIDES TO STRAIGHT THINKING. By Stuart Chase. Harper & Brothers, 1956. 212 Pages; Index; \$3.50. In these days of the propagandist, the public relations expert, the zealot with the closed mind, and the demagogic politician, it's a good idea to stop every so often and analyze the arguments that are swaying your opinions. If you think things over before you're sold, and have read this entertaining book beforehand, your sales resistance to false logic will increase several hundred percent. Chase demolishes "they."

GUN DIGEST, 11th Edition. Edited by John T. Amber. The Gun Digest Company, 1956. 288 Pages; Illustrated; \$2.50. We've run out of things to say about each new edition; by this time you either don't care or wouldn't be without it. General Hatcher's roundups on rifles and handguns are worth the price of the volume.

HEROES OF THE ARMY. By Bruce Jacobs. W. W. Norton & Company, Inc., 1956. 240 Pages; Index; \$3.50. Historical background of the Army's top decoration, plus twenty stories of how the medal was won, plus the complete list of Medal of Honor winners since 1898. Jacobs writes well, and clearly. This is a must for organization libraries; keep it where young soldiers can see it.

MARLBOROUGH. By Maurice Ashley. The Macmillan Company, 1956. 144 Pages; \$1.50.

NAPOLEON. By H. Butterfield. The Macmillan Company, 1956. 143 Pages; \$1.50.

OLIVER CROMWELL. By C. V. Wedgwood. The Macmillan Company, 1956. 144 Pages; \$1.50.

British-written biographies of three great military figures. Very short books, running 128-132 pages, they are quickly read, contain the essential information for less than a complete study, and contain helpful bibliographies for further study if desired. Get-rich-quick course for those who can't spare the time but want to be cognizant of the figures.

SEGREGATION: The Inner Conflict in the South. By Robert Penn Warren. Random House, 1956. 66 Pages; \$1.95. A first-hand report on segregation and desegregation written by a white Southerner who recently returned to the South for a new appraisal.

SHIP 16: The Story of the Secret German Raider Atlantis. By Ulrich Mohr as told to A. V. Sellwood. The John Day Company, Inc., 1956. 255 Pages; Illustrated; \$4.00. There's something admirable about the raw courage of a crew that takes out a lightly armed commerce raider, even though the vessel is designed to take on ships less combat-worthy than itself. The *Atlantis* was the nemesis of the *Zamzam*, among others. This is good adventure reading, with a military application.

THE SIEGE. By Arthur Campbell. The Macmillan Company, 1956. 212 Pages; Illustrated; \$3.00. A typically British account of the sixteen days during which the 4th Battalion of the Royal West Kents held off a Japanese division at Kohima. War at its worst.

sense 1, phenomenon, n.

Basic air doctrine deals with the phenomenon of flight, with the new relationships that exist as a result of hitherto unrealized speeds, range, mobility, and flexibility, and their application to the principles of war, such as those of mass, dispersion, and surprise, as well as to their application to the principles of peace, such as those of friendly association, distribution of economic wealth, and rendering of service. Cf. operational air doctrine."

"Defeat, n. 1. A condition or situation resulting from being overcome in combat, battle, or war, or from being forced to give up a particular objective either in reaction to military force or in reaction to economic, political, or psychosocial pressures. 2. An instance of one such situation or the other, as in 'he suffered two defeats.'"

Defeat need not be in combat alone, although the term implies loss of power in some respect. This loss may be political, economic, or military. Thus defeat for a nation implies that the nation is no longer able to pursue a national objective. This may result without any prior military engagement, as when a nation recognizes its inability to control the air, or when a nation suffers a diplomatic reversal."

These samples should suffice. The parallels are obvious, and we need not belabor them. A glance at the newspapers in July of this year would indicate that the Air Force is indeed making words serve Air Force purposes.

Can the Army learn something from this official document?

After Dienbienphu, What?

THE VIET-MINH REGIME: Government and Administration in the Democratic Republic of Viet-Nam

By Bernard B. Fall
Institute of Pacific Relations, 1956
196 mimeographed pages; maps; charts;
\$2.50

Reviewed by

LT. COL. PAUL M. A. LINEBARGER

Now and then a book is written by a scholar who really knows what he is talking about: he has been there, he has done it, he has used scholarship to enrich and to correct personal experience, not to replace it. Such is this revised book on Indochina by Dr. Fall. Now only 29 years old, Fall has four years in the French guerrillas and a lieutenantancy in the 4th Moroccan Mountain Division behind him. He lived with the French army in North Vietnam as part of his preparation for a Ph.D. at Cornell. His book has the bite and the immediacy of a good staff report.

The work covers only the Communist

or of the Navy. Hence, autonomy, n.

Autonomous and autonomy became doctrinal terms during the AF struggle to achieve separation from control by the Army. Autonomy for

the AF, came with the National Security Act of 1947."

"Basic air doctrine. Doctrine concerned with the nature of air power, and with what can be, and what cannot be, done with it. See doctrine, n.,

or Northern half of the country. The maps show what French G2 reported, and what the facts turned out to be. The charts give more information on a Communist government than Red authorities usually like to see in print.

Though mimeographed, the book is definitive. It shows the men, the government, and the economic system which beat France at Dienbienphu, and it gives clear lines for the further action of the Vietnamese Communists. *After Dienbienphu, what?* can be answered very easily with, "More trouble for us Americans, sooner or later."

This book shows how well a bright soldier can turn scholar. Not everyone can get first-hand material, but some who could, do not. Fall has shown what courage and initiative can add to scholarship. It is a great deal indeed.

Yapping of Pacifists

THE CIVILIAN AND THE MILITARY

By Arthur A. Ekirch, Jr.
Oxford University Press, 1956
340 Pages; Index; \$6.50

Reviewed by

COLONEL FREDERICK BERNAYS WIENER

This volume, by a Professor of History at The American University in Washington, purports to be "the first complete account of the rise and decline of the anti-militarist tradition—rooted in fear of dictatorship—that has been an important part of the American heritage from colonial times until now."

At the outset, it may well be questioned whether there is such a tradition in the pacifist sense that the author has in mind, any more than there is an American tradition that officers are to be elected by the enlisted men, or that generals can safely be selected from among men prominent in political life, or that "a million men will spring to arms overnight."

More to the point, however, is the demonstrable fact that this book is really extraordinarily poor stuff, masquerading as scholarship because buttressed by footnotes and by the imprimatur of a distinguished university press.

For what is presented is no more and no less than an annotated account of militant, articulate, and thoroughly doctrinaire pacifism over the years. The author acknowledges his indebtedness to the Oswald Garrison Villard papers, which he examined. That worthy (see "Mr. Villard's Military Chaos," *Coast Artillery Journal*, January-February 1940) was anti-military to the point of monomania. The book under review reads, for extended passages, as though the author had simply summarized the Villard scrap-books.

Every time a disgruntled Congressman sounded off against the Army, it is duly recorded. The old anti-ROTC propaganda, not excluding the agitation against

the honorary girl colonels, is set forth deadpan and at length. The 1940 opposition to conscription for overseas service based on constitutional grounds is uncritically copied, without any apparent awareness that that contention was rejected by the Supreme Court in 1918—*Cox v. Wood*, 247 U.S. 3, in case anyone cares. And why, after World War II and its triumph over Hitlerism, a professor—mind you—should still speak of the "stupidity" of war (p. 234), is something better left to the psychiatrists.

Professor Ekirch's account of the yapping of the professional pacifists prior to Pearl Harbor should be read in conjunction with those volumes of the Army's World War II history that recount the agonizing efforts of the individuals whose duty it was to make the country strong enough to withstand the assault of the Axis. Any one who will undertake such a course of parallel reading will be impressed (1) by the limited vision of the doctrinaire; (2) by the lack of proportion and of perspective inherent in the work under review; and (3) preeminently, by the public need for enlightenment in the facts of military life in an untroubled world.

Before the Red Cross

LINCOLN'S FIFTH WHEEL: The Political History of the United States Sanitary Commission

By William Quentin Maxwell
Longmans, Green & Company, 1956
372 Pages; Index; \$5.00

Reviewed by

GEORGE J. STANSFIELD

This is the first comprehensive account of the U. S. Sanitary Commission which has ever appeared. This very readable volume provides insight into camp arrangements, soldier diet, drill and morale, and on "sutlers, recreations and the traits of officers high and low."

The title is taken from President Lincoln's comments upon signing the Executive Order establishing the Commission on 12 June 1861. The lessons of the Crimean War were fresh in the minds of the leading citizens who founded the Commission to make recommendations to the Government in the area of sanitary affairs. It can be considered the forerunner of today's American Red Cross.

The President, Unitarian clergyman Henry Bellows, and the able first Secretary, General Frederick Low Olmstead, planned to form a "link between the recruit and the rest of the country and to do the things the [Medical] bureau could not perform." As the failures of a Medical Bureau designed for a peacetime army of 15,000 became increasingly apparent, the Commission, forced to be a critic, pressed for reorganization of the Bureau and achieved the appointment of William A. Hammond, as Surgeon General (1862-64). Hammond was replaced by J. K.

Barnes as the result of the activities of Secretary of War Stanton, who continually impeded the work of the Commission, in the later days of the war.

Through continued public support the Commission raised twenty-five millions in money, goods and personal services from individuals, clubs, companies, and Sanitary Fairs all over the Union until it ceased operations at the end of 1865.

In its operations the Commission distributed stores by three ways of relief: general, special, and battlefield. General relief, supervised by army-level inspectors aided by a staff of agents, ministered to the wants of field hospitals, men in camp and on the march. Special relief aided convalescents, helped forward pay to soldiers' homes, and distributed reading matter. The Commission was instrumental in the establishment of *The Army and Navy Journal* and *The Nation*, and even set up a 600,000-name hospital directory, as well as attempting to establish higher physical standards before accepting recruits. So far as battlefield relief was concerned, the Commission's services in providing much-needed medical supplies, food and clothing, even extended to the designing of hospital cars used until the war's end. Since total deaths in both armies has been estimated as being 625,000 (the proportion caused by disease over weapons being about thirty to one), it can be seen that without the Commission's activities suffering and loss of life would have been far greater than they were.

Yet, as President Bellows pointed out: allied, Government and Commission could have done five times as much good as the Commission did accomplish in spite of official opposition.

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Report from your AUSA CP

On the day this issue rolls from the presses, September 25, your President, Lt. Gen. Walter L. Weible, is scheduled to be at University Park, Penna., to speak to the Pennsylvania State University Company of the Association of the United States Army. Still unchartered, and destined to remain unchartered at least until the Annual Meeting, the Penn State Company has been organized for many months, waiting for official sanction. Chapter officers have obtained the use of Schwab Auditorium, and expect a capacity audience of cadets, students, faculty, and retired and Reserve personnel. There is no substitute for enthusiasm in Association affairs; Penn State has it to spare.

Time is getting short for those who desire Chapters, ROTC Companies, to be chartered at Annual Meeting. Copies of Chapter, Company regulations are available upon request to Secretary. Form a Chapter; you'll be in good company.

Annual Meeting, 25, 26, 27 October, isn't getting out of hand but occasionally staff takes second look to make sure it's our own meeting we're dealing with. Despite fact that this is first year for industrial participation, and only second year for entire concept, the meeting is snowballing at great rate. Registrations, booth reservations, commitments by speakers--all come rolling in ahead of schedule. Interest exceeds expectations. If you're coming, better move fast or you'll be seeing most of it on television.

Second Army, in cooperation with Ohio State University, offered a course in American military history for ROTC instructors; the course ran from 20 August through 31 August. Col. T. N. Dupuy, PMS&T at Harvard, directed the instruction. Four civilian historians and three officers made up the faculty. Since disseminating

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"The Association of the U. S. Army shall be an organization wherein all who are in accord with its objectives may join in the exchange of ideas and information on military matters, and in fostering, supporting, and advocating the legitimate and proper role of the Army of the United States and of all its elements, branches, and components and providing for and assuring the Nation's military security." (Statement by the Executive Council, Association of the U. S. Army; adopted 14 December 1953.)



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General Bradley to Serve on AUSA Council

AUSA regrets that a deadline forced the September issue of ARMY to go to press before it received the welcome news that GENERAL OF THE ARMY OMAR N. BRADLEY would serve on the new Council of Trustees of the Association. His acceptance brings the number of men who will take office during the annual meeting in October to fourteen. As our readers know, General Bradley is a former Army Chief of Staff and Chairman of the Joint Chiefs of Staff. Since 1953 he has been Chairman of the Board of Bulova Research and Development Laboratories, Inc.

knowledge of military history is a key part of ARMY's editorial policy, our interest in the course is more than casual. We hope this is a trend that will be followed in the future. We are always reminded of the incident in World War II when a staff officer found some World War I records and went into his superior's office, very excited, saying: "Chief, these guys made the same mistakes we did!"

Brig. Gen. Roy E. Lindquist, Deputy Test Director, Troop Test Jump Light, has indicated his interest in building the Association by forwarding our President a set of interesting statistics which cannot be reproduced here in full for reasons of security, but what the figures amount to is this:

% of AUSA members among officers before orientation	36.8
% of AUSA members among top three NCO grades before orientation	8.3
% of AUSA members among officers after orientation	87.7
% of AUSA members among top three NCO grades after orientation	83.3

The General's postscript is to the effect that he isn't through yet.

Gray hairs for our Circulation Manager, but smiles for everyone else, came in from the 25th Division Artillery early in August. A large envelope arrived with 210 memberships; a fair day's business in any Association. Thanks to the Redlegs of the 25th; other units please copy.

Several months ago we asked for an expression from the membership on the idea of Association decals for private automobiles. This idea appears to be dead and buried; two requests for decals hardly filled the Secretary's "IN" basket; the minimum quantity that can be ordered economically is 10,000. Membership lapel buttons for wear with civilian clothes continue to move with steady demand, and Association plaques will be available about the time this appears in print.

Another MAAG military college library asks for help. Lt. Col. E. McC. Dannemiller asks that gifts of military books and magazines for Vietnam be sent to Senior Advisor, Military College, MAAG, Navy 150 c/o FPO, San Francisco. The College is on the Leavenworth level. Clean out your attics, and make room for newer literature.

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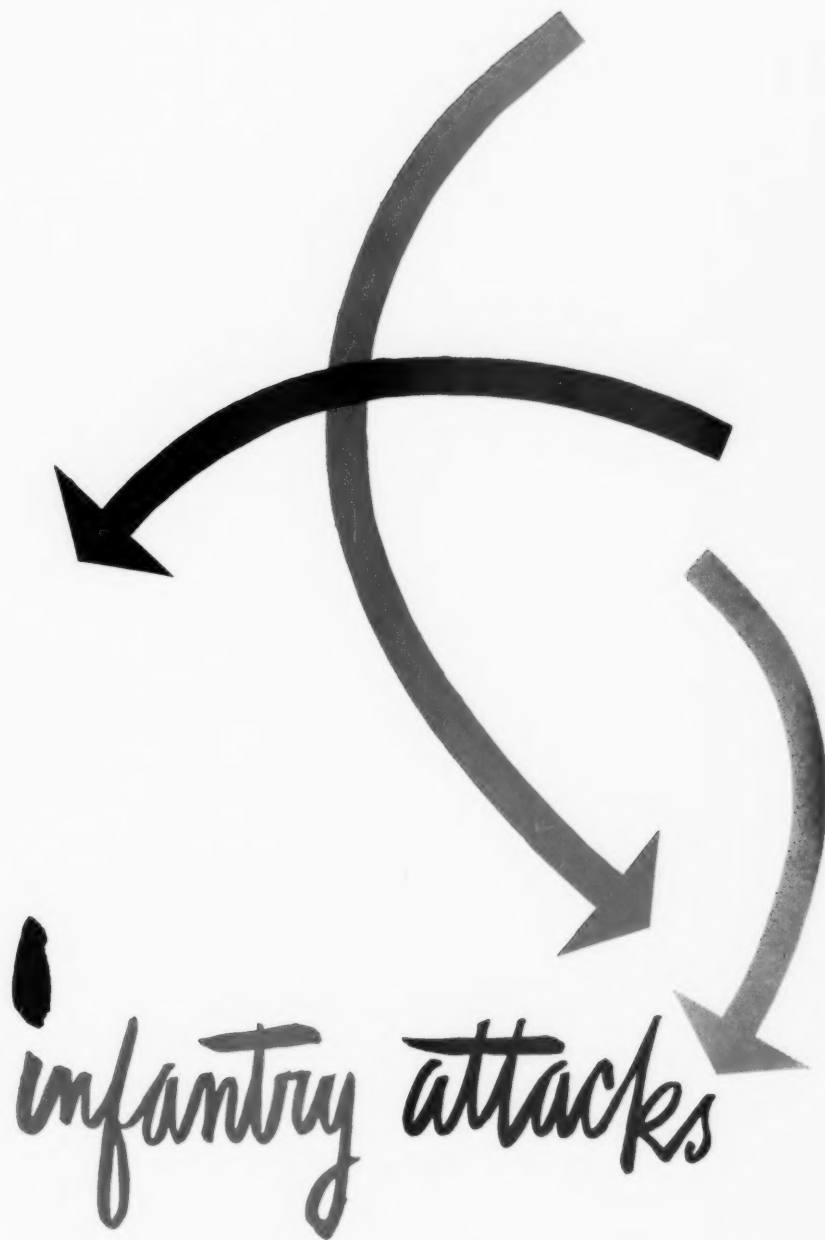
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